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DIESEL RAILWAY TRACTION

The September issue of this RAILWAY GAZETTE *publication, illustrating and describing developments in Diesel Railway Traction, is now ready, price 2s.*

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THE RAILWAY GAZETTE
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The Winter Train Services

BRITISH Railways' winter train services to begin on Monday, September 27, received a good press, particularly in the London evening papers last Tuesday. On Wednesday, under the heading "New and Faster Trains," *The Times* gave nearly a column on its main news page. The P.R.O.s did their job well. In our News Section we publish practically in full the "hand-outs" regarding the winter train services given at a press conference presided over by General Sir William Slim. Deputy Chairman of the Railway Executive. They reveal further progress towards the restoration of pre-war services, amenities and facilities and a weekly booked passenger train mileage of 3,949,733 for next winter compared with 4,770,453 for 1938-39 and 308,000 more than last winter. If the railways had not been nationalised we can see just the same amount of restoration being made by the four main-line companies—no more and no less. British Railways have still nearly 5,000 fewer coaches available for traffic than in 1939. The economic crisis delays new construction and the catching up of arrears of maintenance. The Railway Executive is wise in not attempting to run before it can walk. But in the meantime it can think, investigate and plan. Given no third world war to defer hope still further we look forward to the announcement of the great timetable revision of British Railways for the summer of 1951.

* * * *

Findings of Court of Inquiry into Wage Claims

The recommendations of the court of inquiry held under the chairmanship of Sir John Forster, K.C., into the claims of the engineering unions for a wage increase of 13s. a week, includes an increase of 5s. a week in the national bonus for adult male workers, and a minimum basic district rate for skilled workers of 66s., and for unskilled workers, 51s., which will mean increases in some cases of 4s. 8d. a week exclusive of the national bonus. More than 2,000,000 wage earners will be affected, and the cost to the industry, probably, will be about £30,000,000 a year. Again it is recommended that the employers and unions should get together to work out a simplified new wages structure. The court seeks to justify its recommendations by pointing out that the claims were formulated before the White Paper was drawn up, and issues, at the same time, a warning that when the present claim has been dealt with, other claims in the engineering industry could not be admissible which did not come strictly within the four walls of the White Paper. Meanwhile, as was reported in our issue of August 30, the Executive Committee of the National Union of Railwaymen is proceeding with its claim.

* * * *

Trades Union Congress

It was not expected that the recommendations referred to in the previous note would receive universal approval, and already some 3,000 engineers on Clydeside have registered a protest by staging a token strike. The subject is to be discussed at the Trades Union Congress in the latter part of this week. The most important contribution so far to the Margate conference has been the outspoken address by the Chancellor of the Exchequer on the need for greater production all round and his exposure of the popular fallacy that dividends absorb a large proportion of the proceeds of industry. Such disbursements last year, said Sir Stafford Cripps, were no more than 7 per cent. of the wages and salaries bill, and even if corporation profits were reduced by as much as 25 per cent., the purchasing power of the wage and salary earners would be increased by no more than 4d. in the £1, or less than 2 per cent. After listening to his appeal the delegates called for an extension of joint consultation and for more union representation and participation in the control of the nationalised industries.

* * * *

Parallel Action to Increase Production

Last week, Sir Stafford Cripps announced that the F.B.I. and the T.U.C. had agreed to organise parallel action to bring about increased industrial productivity in the shortest possible time. Further growth in our labour force could not be ex-

pected, and, therefore, the only way in which we could attain the essential increase in production was from a higher rate of output per man per year. Greater output could be achieved in many industries by increased capital investments in plant and machinery, but, though this was essential work, results would not be obtained quickly. Moreover, already we were spending as much as we could afford in this direction, and exports must come first. The Chancellor of the Exchequer said that the Government did not wish to "demand longer hours or other forms of increased physical strain on the people," and so another means of increasing production must be found. Overhauls, consisting of a careful review of every aspect of factory working methods, combined with good teamwork, had given yields of up to 50 per cent. in increased output at less cost and higher pay. He had discussed this urgent problem with the F.B.I. and T.U.C. as representing the industrial partnership, and both had expressed themselves in agreement with such a course of action, which was to be carried out on a basis of mutual understanding, but each tackling the problem in its own way.

* * * *

Capital Assets Wastage

The dissipation of capital assets, which results from the Government's taxation policy, has caused concern in many branches of industry, not least in those dealing with engineering. Sir Geoffrey Heyworth, Chairman of Lever Bros. & Unilever Ltd., has estimated that this taxation policy is causing industry's capital assets to be absorbed as revenue to the tune of between £100 million and £150 million a year. His company, out of its 1947 earnings, set aside £3,600,000 for replacement of fixed assets in addition to the normal depreciation charge at the further sum of £4,200,000 to assure the replacement of physical stocks at increased prices. These funds have been taken out of profits after income tax and profits tax have been paid, and they make up only the capital loss during 1947. This effect of inflation, the draining away of productive equipment and the stocks of individuals and nations, while it creates a fiction of prosperity, is well known in continental countries, and in some, such as France and Belgium, tax laws recently have been altered to take it into account.

* * * *

Replacement Cost of Assets

The replacement costs of fixed assets in present circumstances is so high in many businesses as to constitute a real menace to the maintenance of high productivity. In the Unilever group the cost value of fixed assets at the end of last year was £82 millions. Depreciation charges based on original cost, as allowed by the Inland Revenue, will lead to the accumulation of this sum for replacement as and when they are required. The directors estimate that to replace the existing assets today would cost £148 millions, so that at present price levels the depreciation fund would be about £66 million short of requirements to maintain the present scale of operations. Further, the rise in the value of stocks used in manufacture has to be declared as profit for tax purposes, but if only the original value is used to buy fresh raw materials the physical volume of these will get less and less. It is clear, therefore, that some of the funds normally looked on as profits consist, in part, of capital. The ultimate effect on British industry must be serious.

* * * *

Irish Transport Stockholders' Views

Sir James Milne, who is investigating the position of transport in Eire, has received a memorandum containing the views of the Irish Transport Stockholders' Association. The members of this Association, it is stated, feel that "with full compensation to stockholders at par value of their holdings, nationalisation would be better than the present situation." Presumably, therefore, the Irish stockholders' optimism as to what may be expected under State purchase has not been dimmed by the experience of their English brethren. The Irish Stockholders' Association points out that the Irish Transport Company has been forced to accept wage rates and conditions of employment fixed under statute, and not permitted to make the increases in charges necessary to compensate it for the higher costs; nor has it been allowed to abolish uneconomic services. Since 1939, wages and salaries had risen by between 70 per cent. and 100 per cent., but the maximum increase in the statutory charges permitted by the Government had been in the region of 50 per cent.

* * * *

Railway Rating Surveyors

Among the long-established official bodies whose functions have been absorbed by the Railway Executive is the Association of Railway Rating Surveyors. It was established on June 8, 1882 when ten railway rating surveyors met in the board room of the old Midland Railway Company at Great George Street, Westminster. Membership increased by 19 by 1910 and dropped to five on the railway amalgamations under the 1921 Act. The members discussed and read papers on various matters of professional interest and combined business with pleasure by holding their summer and autumn meetings at coastal resorts; the Great George Street headquarters was reserved for gatherings during the colder months. A recent issue of the *Western Region Magazine* gave some interesting extracts from the minute book. The proceedings seem to have been conducted very harmoniously and undoubtedly the Association served the railways well. Moreover, throughout the years it resisted successfully all the attempts to bring it within the ambit of an official "railway committee." The minutes were private and confidential to members and their Honorary Solicitor, and were not circulated to other railway officers except when, for the last few years, copies were sent to the General Managers at their special request.

* * * *

Popularity of Cheap Fares

The decline in passenger traffic on the railways which has been indicated for some time in the monthly statistics issued by the British Transport Commission, is due, in part, to tighter money conditions. The "spending honeymoon" which characterised the war and demobilisation periods is now well over, and the greater stringency in money is reflected by railway travel as well as in consumer goods markets. That the public is still willing to travel by train if it can achieve some saving on the relatively high level to which successive increases in charges have raised passenger fares, is shown by some details given elsewhere in this issue of the response which has been made to a number of special excursion trains run in the Southern Region during the week ended August 28. In several cases the number of passengers greatly exceeded expectations. A notable example was that of the Streatham Hill—Brighton excursion run on August 25, when the number of passengers was no less than 1,672. The statistics lend point to the suggestion made in our issue of July 30 that a reduction in fares in anticipation of the economies which presumably the British Transport Commission and the Railway Executive expect to arise from the unification and standardisation, although it would be a bold step, might not be without its reward.

* * * *

South African Railways Staff College

Elsewhere in this issue Colonel W. R. Gordon describes what may be termed a university for railwaymen which is being built by the South African Railways at Esselen Park between Johannesburg and Pretoria. Already, 250 trainees are being instructed in the completed part of the college, and 920 at a temporary establishment elsewhere. When the college is working at its full capacity, which it is hoped will be within three years, the aim is to train 1,200 students at a time. The South African Railways & Harbours employs 165,000 Europeans and non-Europeans, and the ultimate object is to have every railwayman, whatever his grade, college-trained. The duration of courses ranges from six weeks for shunters to six months for police and catering trainees. Instructors are chosen with care from candidates who have satisfied a selection board and have been sent to the college for one or two months on probation, a method which has given excellent results. Esselen Park eventually will be a self-contained community with living quarters for the instructors and their families, and two residential blocks for students. Full recreational facilities for instructors and students will be provided.

The college grounds contain a number of historical railway exhibits which will be housed in a museum when a permanent site has been selected.

* * * *

The Chicago Railroad Fair

On July 20, the Railroad Fair, one of the most elaborately organised spectacles of recent years, was opened at Chicago. Occupying a mile-long strip along the water-front, its 50-acre grounds contain every imaginable exhibit to arouse an interest in America's railway history. Practically every railway management had contributed to "the largest gathering of old-time and modern railroad stock ever assembled for a non-operating purpose." As a study in the development of locomotive engineering, the Fair must certainly be without parallel. No fewer than twenty-one historic locomotives have been gathered there, covering the period 1829-1900; and there is also a remarkable assembly of modern types, as well as passenger coaches and freight vehicles. It is good to know that, in spite of the haphazard growth of America's railways, there is so keen an interest in their surviving links with the past. An occasional event on the grand scale in this country would undoubtedly evoke a very wide response, and would help to remind those seeing it of the wisdom of preserving some of the more important examples of our locomotives and rolling stock.

* * * *

British Railways' Wagon Stock

ON many occasions during the last 50 years the British railway companies considered the question of adopting high-capacity wagons for goods and mineral traffic. Some of the more enterprising companies tried experiments with wagons designed to carry from 15 to 50 tons, but in the end the 12- to 13-ton four-wheel wagon was found to be the most convenient and economical unit for general purposes. Larger wagons proved useful for dealing with certain bulk traffics, but were as a rule confined to shuttle services between specific points or to areas where exceptional conditions favoured their employment. This phase of the matter was discussed in an article headed "High-Capacity Wagons," which appeared in our issue of July 11, 1947.

So far as we can judge, the British Transport Commission and the Railway Executive are not likely to change the practice of the old railway companies abruptly and make the 40-ton wagon a standard type, as an indefatigable correspondent of ours recommends. Nationalisation may, however, hasten the process of eliminating wagons of less than 12 tons capacity. Most of those small wagons belonged to private owners and no doubt a large number has been scrapped since they were requisitioned in 1939 and subsequently taken over by the Commission.

The state of the total wagon stock at the date of vesting is an unknown quantity, because the Ministry of Transport has not issued a summary table of railway returns for 1947 in the same form as the figures published for the years 1938 to 1946. It is unfortunate that the continuity of our railway statistics should be broken at the transition stage from private to state ownership and management. In the absence of a more recent analysis of British Railways' wagon stock, it may be useful to summarise the 1939 and 1946 records and to add such information as can be gleaned from the Commission's current *Transport Statistics*.

The table below gives particulars of the ordinary wagons available in 1939 and 1946, both railway-owned and requisitioned. It excludes special wagons, cattle trucks, rail and timber trucks, and brake vans, which together numbered 69,015 in 1939 and 68,364 in 1946. It also ignores private vehicles not taken over by the Government, such as oil tanks, salt wagons, lime and limestone wagons; these number about 25,000.

Capacity	1939	1946	Per cent. increase or decrease
Below 12 tons	478,660	396,123	— 17
12 to 13 tons	634,790	692,689	+ 6
Over 13 and under 20 tons ...	21,845	32,509	+ 49
20 tons and upwards	48,688	51,051	+ 4·8
Total	1,183,983	1,172,372	— 1

The table shows that small wagons were weeded out freely and replaced mainly by 12- to 13-tonners. The net result was that 11,611 fewer wagons were available in 1946—a loss of about 1 per cent.—but the total tonnage capacity of the serviceable stock was higher. This trend evidently continued in 1947 and during the early months of 1948. The Commission's *Transport Statistics* for May gives the number of all types of wagons, including brake-vans, as 1,199,525. The number of ordinary wagons in May would therefore be 1,131,525 approximately—say 52,400, or 4 per cent., below 1939. The official policy is apparently to replace railway-owned wagons as fast as they are broken up, whereas in the first five months of this year 16,880 requisitioned wagons were withdrawn from service and only 2,941 replaced.

A striking feature of the table is the increase of 49 per cent. in the number of wagons carrying 13 and under 20 tons. This was due mainly to a decision of the Ministry of Transport, given in 1943, that end-door mineral wagons of 16 tons capacity should be constructed in preference to 12- to 13-tonners. No doubt the Ministry would have liked to order 20-tonners, but many collieries and works are unable to handle the larger type, owing principally to its long wheel-base. In existing conditions, structural alterations cannot be undertaken at terminal points, so that there is no immediate prospect of the 20-tonner becoming the standard wagon for coal and minerals, but the National Coal Board will be helping itself, as well as British Railways, if it equips new collieries with gear for that class of wagon. Shipping appliances at docks and staiths, which were railway-owned, have been adapted at great expense to take 20-tonners and the best hope of extending the user of these wagons lies in co-operation between the National Coal Board and the Railway and Docks Executives.

There is even less likelihood of the 12- to 13-ton wagon being supplanted as the standard vehicle for the conveyance of general merchandise. Before the war the average wagon load at starting point of merchandise in classes 7 to 21 was never much above 3 tons. The average rose to 4·27 tons in 1944, but has declined with the coming of peace to less than 4 tons. In these days of keen road, water and air competition, wagons cannot be held back until full loads of traffic have accumulated. Despite prompt forwarding, ensuring next morning arrival at destination in many instances, the railways are in danger of losing their grip on some of this valuable traffic, which in a normal year represented about one-fifth of the total freight tonnage, but, bearing high rates, produced nearly half of the total freight receipts. British Railways cannot risk any further loss of their best-paying business in an attempt to improve wagon loads.

What the advocates of large wagons overlook is the difference between our railway working and the transport requirements of countries overseas where large quantities of primary products have to be moved. British Railways do business of a retail order, in comparison with the wholesale transactions of the U.S.A. lines, which are quoted frequently as an exemplar of efficiency. In 1947 the American lines forwarded at least five times the British tonnage and hauled it for such long distances that they worked 25 times as many ton-miles as our railways did. We have nothing like the great blocks of traffic which are handled in the States at high pressure. Every summer there is a hustle to take care of grain harvests which recently have yielded "miracle crops." During the season of open water on the Great Lakes, 52,000,000 tons of coal fall to be shipped through Lake Erie ports, while in the reverse direction 85,000,000 tons of iron ore from the head of the Lakes have to be discharged to rail.

Mass movements of that size offer an ideal field for working large wagons in long trains, hauled by very large locomotives. The average capacity of the American wagon is 51 short tons and, with a paying load of 32 tons, 63 per cent. of the potential carrying power is taken up. In 1946, the average British wagon could carry 12·84 tons, but, with a load of 5·99 tons, only 46 per cent. of its capacity was used. These figures furnish a clear proof that wagons, which are essential for efficient operation on American railways, would be unsuitable for general service in this country.

* * * *

Northern Ireland Transport Authority

THE Minister of Commerce for Northern Ireland has appointed the members of the Northern Ireland Transport Authority, established under the Transport Act (Northern Ireland), 1948, which provides that the members of the Authority shall be "persons who have had wide experience and have shown capacity in transport, industrial, commercial, agricultural or financial matters, the conduct of public affairs, or in industrial relations." Reference to the Act was made in some detail in our August 13 issue.

The Chairman of the Northern Ireland Transport Authority is Major F. A. Pope, sometime a Vice-President of the London Midland & Scottish Railway, who has been Chairman of the Northern Ireland Road Transport Board since the beginning of this year; Major Pope was Manager, L.M.S.R. Northern Counties Committee, Belfast, from 1941-43. The other members of the Authority are Mr. W. A. Edmenson, a leading figure in shipping circles, and Chairman of the Northern Ireland Civil Aviation Advisory Committee; Mr. R. P. C. Gotto, a Belfast Harbour Commissioner; Sir Dudley E. B. McCorkell, a member of the Northern Counties Committee, and at one time Mayor of Londonderry; Mr. S. J. McCoubrey, Chairman of the Northern Ireland District of the Confederation of Shipbuilding & Engineering Unions, and a member of the panel for the National Arbitration Tribunal; Lt.-Colonel Viscount Massereene & Ferrard, Chairman of the Northern Counties Committee; Major W. G. Nixon, a prominent agriculturist; Mr. J. S. Rogers and Mr. D. Wilson Smyth, members of the Northern Ireland Road Transport Board; and Mr. A. E. Swain, a former President of the Ulster Farmers' Union.

The new undertaking will be formed in the first instance, as stated in our August 13 issue, by the merger of the Northern Ireland Road Transport Board with the Belfast & County Down Railway. Under a voluntary agreement with the Government the B.C.D.R. is being taken over for £483,000. It is believed that the Northern Counties Committee will probably be acquired for about £2,000,000; it is understood that the figure will be disclosed in the Northern Ireland Parliament next month. It is also reported that the portion of the Great Northern Railway in Northern Ireland will be purchased as soon as practicable.

The Authority will have under its control at the outset 104 double-deck and 884 single-deck buses and 924 motor lorries. The acquisition of the B.C.D.R. and N.C.C. will give the Authority control of approximately 340 route miles of railway track, some 90 locomotives, and about 440 coaching vehicles 3,000 wagons and 4 railcars. It will have a payroll of about 10,000. It will also have the Slieve Donard Hotel, Newcastle; the Midland Hotel, Belfast; the Laharna Hotel, Larne; and the N.C.C. Hotel, Portrush.

Under the terms of the Act the Authority will have power to carry goods and passengers by rail, road, and inland waterway within Northern Ireland, and to provide transport services outside Northern Ireland in connection with the provision of transport services within it; and it will have certain ancillary powers, such as those of carrying on hotels, storing goods, and manufacture and repair of road and railway rolling stock.

* * * *

Transport Statistics

THE latest issue of *Transport Statistics* is twice the size of previous bulletins. In an unsigned foreword the British Transport Commission explain that two new parts have been added. One of these gives aggregate figures for the current year up to date, and the other shows the trend of the principal figures, period by period, in comparison with results for 1947. The new sections will appear in each future issue and will be useful to all who study the statistics month by month.

Several of the tables have been remodelled or expanded. The traffic receipts table now includes figures for steamships, which produced a gross revenue of £596,000 in June. Separate particulars are given also for hotels, restaurant cars, and station refreshment rooms. Receipts amounting to £1,039,000 in June show that railway catering is an important business.

In two new tables, headed Passenger Takings, the originating receipts of British Railways and London Transport are analysed by fare categories and classes of travel. For British Railways the takings are compiled on the same basis as passenger journeys originating, which are analysed by class also. It is interesting to note that first class passengers made only 2·9 per cent. of journeys in June, but paid 13·2 per cent. of the takings.

Another helpful change is the division of coaching train mileage between steam and electric traction, revealing that the intensive nature of electric services has brought up their mileage to nearly a quarter of the steam mileage. To the Locomotive Coal Consumption table have been added details of electric power, diesel oil and fuel oil used by British Railways. A new table gives similar information for London Transport. The tables for Inland Waterways now give separate figures for each operating division.

The bulletin in its new shape contains full statistical information about British Railways, save in respect to the vital matter of operating expenditure. A quotation from the Commission's foreword will indicate that it is not happy about the net revenue position: "The figures relating to traffic receipts reflect the increases in railway fares, rates, and charges which were introduced during the year 1947 with the intention of meeting foreseeable increases in working costs. The estimates of traffic made a year ago are not in fact being realised; and the rate of increase in gross receipts from railway working during the first half of this year has been less than that required to yield the additional revenue of £65 million which the increased charges were expected to produce in 1948. Increased costs which could not be foreseen when the estimates were made are also being incurred, although economies and savings may go some way towards meeting these costs."

We have not heard of any large-scale economies being effected since the date of vesting, which will be an offset to the growing burden of expenditure; on the other hand, we know that several costly concessions have been made to large numbers of railwaymen, and that 22,000 people have been added to the payroll of British Railways during the first 24 weeks of the year. Perhaps the Commission might have averted the fresh N.U.R. claim for an all-round advance in pay if it had been less reticent about its net receipts.

On later pages we print a summary of the principal statistics for the June period in the usual form and comment briefly on the results. In a subsequent article we propose to discuss the make-up of some of the statistical tables in a more general manner.

* * * *

South Australian Government Railways

THE working results of the South Australian Government Railways for the year ended June 30, 1947, show a total deficit of £1,611,554, an increase of £164,690 on the previous year's deficit. Earnings were £4,621,702, and combined working expenses and pension charges, £4,949,005. Some operating results for 1945-46 and 1946-47 are given below:—

	1945-46	1946-47
Mileage open	2,547	2,547
Train mileage	6,353,586	6,010,031
Passenger journeys	23,118,553	19,827,000
	£	£
Passenger receipts	1,328,976	1,044,198
Goods receipts	2,907,033	2,966,160
Miscellaneous receipts	661,142	611,344
Total receipts	4,897,151	4,621,702
Total working expenses	5,010,283	4,949,005
Deficit (incl. interest)	1,446,864	1,611,554

Additional costs, including wage increases and increased cost of supplies since 1937-38, amount to more than £1,537,000, almost equal to the deficit for the last year. If these increased costs therefore had been passed on to the railway users, the deficit would have been almost wiped out. The 1937-38 deficit was £779,000. The Commissioner points out that the effect of the 40-hr. week, which operates from January next, will be to increase working expenses costs to £2,300,000 per annum.

One of the major causes of a falling-off in passenger traffic was the poor quality of the coal now being received, which badly affects train schedules. Local (Leigh Creek) coal cannot be used on the broad gauge lines in the summer because of fire risk. It is urged that the capital of the railways be written down, and a contrast is made between the South Australian Railways and the Canadian Pacific Railway, towards the capital cost of which the districts whose land value had appreciated

because of the building of the line, were required to contribute. The Commissioner sees no solution to the road-rail problem but co-ordination under a Transport Control Board composed of impartial members. The report mentions the frequent criticisms of the American railways of the policy of public expenditure on highways in the United States for which road vehicles pay an inadequate charge.

Early in 1947, a Royal Commission was charged to inquire into the co-ordination of the various services under one administrative authority and the electrification of any part of the railways. Although Victoria and New South Wales have not yet passed legislation for the unification of the gauges in south-east Australia, it is contended that planning and preparation for the unification could be begun at once, so that the work could be put in hand as soon as labour and materials become available.

* * * *

B.T.C. Powers and their Delegation

AN important decision (the first of its kind) relating to the powers of the British Transport Commission was given recently in the Chancery Division by Mr. Justice Vaisey. Although the matter at issue was of a local character, the principles involved are of general interest, and the judgment is thus worthy of examination. The plaintiff was Wilfrid Herbert Smith, a bus proprietor operating a service between Hitchin and Weston, Hertfordshire. This route is on the border of (and in part beyond) the London Passenger Transport Area, and was not worked by the London Passenger Transport Board. In February last, the London Transport Executive began to operate over the route, and Smith contended that this competition was *ultra vires* the Executive. He therefore sought a declaration that the Executive had no statutory authority to operate a passenger road service between Hitchin and Weston; an injunction to restrain that body from so doing; and damages. The Executive contended that the service was within its statutory powers and that the plaintiff had no cause of action.

It appeared that the service was one which the L.P.T.B. would have been entitled to work, but, as it was not within the Board's "special area," this operation would have been subject to securing a road service licence from the Traffic Commissioners. Section 65 of the Transport Act, 1947, relieves the British Transport Commission and its agents of the necessity for securing road service licences in any part of the country, and requires only that approval be obtained for the route and class of vehicle; this step was taken in regard to the Hitchin-Weston route. Section 2 of the Act empowers the B.T.C. to carry goods and passengers by road within Great Britain, and, although sections 63 and 64 give permissive (but not mandatory) powers to prepare area schemes for passenger road transport with provision for compensation to existing operators whose undertakings are transferred compulsorily, the latter powers do not limit or reduce the general powers of the B.T.C. to operate buses anywhere, subject to route and vehicle approval, in competition with existing operators, and therefore without compensation to them unless they are actually transferred compulsorily under an area scheme.

We may add that this power in practice is presumably subject to rather severe limitations outside the London area, by reason of the co-ordination and working agreements entered into with many provincial bus companies by the former main-line railway companies. A typical clause is such agreements is as follows:—

> "The railway company shall not (without the consent of the omnibus company) whether solely or jointly with or as manager or agent for any other person or persons company or corporation commence to operate during the continuance of this agreement any road passenger services plying for hire within the area it being intended that except and subject as aforesaid all the services plying for hire which the railway company may at any time during the continuance of this agreement be empowered to provide in the area shall be operated by the omnibus company. The railway company shall not without the consent of the omnibus company acquire any interest in any road transport undertaking the whole or the major portion of whose area of operations shall be within the area."

Section 14 of the Transport Act makes it clear that the vesting in the B.T.C. of the railway undertakings transferred all the rights, and made the Commission subject to all the liabilities, of the railway companies. The Commission and its agents (such as the Railway Executive, the Road Transport Executive, and the London Transport Executive) are thus restricted as to their bus operations in a large part of the country, and the railway-associated bus companies are not liable to B.T.C. competition without redress. It was therefore unfortunate that some rather wild assertions were made in Court, such as the suggestion that London Transport could operate between Liverpool and Manchester.

As it is clear that the B.T.C. has the requisite powers to work the particular bus service at issue, the main consideration before the Court was whether those powers had been delegated effectively to the London Transport Executive. The Scheme of Delegation dated December 5, 1947, incurred some judicial stricture for its obscure and confusing language, and was described by Mr. Justice Vaisey as a "clumsy and confused production." It delegated to the London Transport Executive (*a*) activities which the B.T.C. is empowered to carry on by virtue of the transfer of the L.P.T.B. undertaking; and (*b*) activities which the B.T.C. is empowered to carry on by virtue only of the powers conferred on the Commission by Section 2 of the Act, so far as those activities are carried on in connection with the activities under (*a*) or are ancillary thereto. Mr. Justice Vaisey decided, "though with considerable hesitation," that the powers requisite to the operation of the bus service at issue were delegated effectively. He therefore dismissed the action.

* * * *

American Railway Engineering

THE field of transport is composed of a number of correlated agencies, and the proper study of any particular one pre-supposes some understanding of the field as a whole. In our own country, the use of the word engineering, without qualification, is usually taken to mean civil engineering, but in the U.S.A. this is not so. Accordingly, the well-known book entitled "Elements of Railroad Engineering" deals both with the civil and mechanical sides of the work, and also gives a prefatory outline of the growth of the American railway system, the development of regulation, competing transport agencies, and such other matters as are considered necessary for the student to bear in mind, so as to place railway engineering in true perspective. The book to which we refer, and of which the sixth edition* was issued recently, has served since 1908 to provide students and others with a general survey of the engineering aspects of railways. It was designed to be limited to the steam railway and thus excludes electrical engineering, but the present edition contains two entirely new chapters, respectively on streamline trains and on power and passenger equipment.

Probably its principal value for readers outside the U.S.A. is the fact that it brings within the compass of one volume a vast amount of information about those details in practice which normally escape the attention of the technical Press, as the latter is concerned primarily with changes and developments. Yet there must be many occasions, particularly nowadays, when railway engineers everywhere are examining different methods, when it is useful to be able to turn quickly to details of the practice in the U.S.A. We know of no better quick source of information recording the 27 species of wood which have been designated by the American Railway Engineering Association as suitable for crossties (sleepers). In addition, we learn that a substantial number of sleepers is produced by farmers living in the vicinity of a railway who do not have an established standard of manufacture. We have selected this item merely at random as an example of the comprehensiveness of the book. Bridge practice, signalling, yard layout, and all other allied topics find their place in this book.

* "Elements of Railroad Engineering." 6th Edition. By the late Wm. G. Raymond, Hy. E. Riggs, and Walter C. Sadler. New York: John Wiley & Sons; London: Chapman & Hall Limited, 37, Essex Street, W.C.2. 9½ in. × 6 in. × 1 in. 442 pp. Illustrated. Price 30s. ($5.00) net

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Working and Accident Reports

"Dairy House,"
Charles Street, Griffithstown,
Pontypool, Mon. August 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—As a practical man and, if I may be permitted to say so, with a keen interest in my work, I read with great interest Sir Alan Mount's annual report on the working and accidents on British railways, as published in your issue of July 30. I also purchased a copy of that report from H.M. Stationery Office and have read it with much further interest, and the thought has struck me whether or not it would have any effect in reducing the number of accidents to the staffs employed if such facts were brought more readily to their notice, *i.e.*, by the placing of such a report in all cabins, signal boxes, canteens, mechanics' institutes, places appointed for booking on and off duty, and also trade union meeting places. I would even go so far as to suggest an individual issue to at least footplate men, signalmen, and permanent-way men.

Yours truly,
KENNETH C. SMITH

Locomotive Works Plates

18, Wheatsheaf Close, Woking,
Surrey. August 20

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—British Railways seem to be finding it necessary to remove or deface locomotive works plates. This is an unfortunate and unnecessary practice, presumably designed only to expunge links with the past. This is happening on the former L.N.E.R., where the fine brass Doncaster works plates are being re-engraved. How can British Railways possibly be associated with a date prior to 1948? I am aware that on the L.M.S.R. locomotives could be seen bearing plates like "L.M.S. built Horwich 1898," but I believe such locomotives had not previously carried works plates.

On the Southern Region a start has been made on the removal of the Southern circular brass plates from the smoke box doors of the Pacifics. I had always regarded these plates as rather pleasant; here, no doubt, the excuse is that the space is required for the new standard cast iron number plate, but surely the plate could be omitted in this instance, or it could be carried above the buffer beam as on 21C1.

Yours faithfully,
J. B. LATHAM

The Distant Signal

Eynesbury,
St. Neots. August 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The comments on my letter published in your issue of August 20, overlook the anachronism that a signal should, in normal working, be passable at danger. Also, the axiom that there must be two "stop" signals between the train and the obstruction—which does not seem to have been the case in many accidents.

In Great Britain (and, maybe, in some other countries) the distant is not a "stop," but only a caution signal, passable at danger. The result is that drivers attach little importance to it, and do not apply their brakes until comparatively close to it—and even after passing it. If, however, the distant were made a stop signal, they would be obliged to begin applying brakes a mile or more before reaching it. Even if they then overran it (with brakes already on) they should have no difficulty in pulling up before reaching the home signal.

I may remind you that at the meeting of the Institution of Signal Engineers in March last, the President called for a simplification and standardisation of our signalling system. The need of this was shown again in the accident at Farnborough (*vide* your issue of August 6) in which the signalman was blamed for being distracted by the infernal din of ringing bells of block instruments, signals, safety devices, and telephones, and by having to keep in mind a variety of instructions.

It is all very well for high officials quietly sitting in their offices and leisurely studying what the signalman (who is obliged to make decisions on the dot) should, or should not, have done. If they had been in his place, probably they would have very quickly gone off their "nuts." The actual working of a signal-box is a very different thing to playing about with model instruments in the head offices.

One might therefore suggest that all these signalling devices—most of which would be unnecessary if the distant were made a stop signal—are largely defeating their own ends. The certain fact is that accidents are far more frequent than before the 1914 war, when the railways carried much heavier traffics, and more quickly, than today.

The failure of the human element would thus seem to be as much a question of the failure of high officials, as of the working staff.

Yours faithfully,
E. R. B. ROBERTS

[Any competent driver knows quite well that a distant signal is a very important signal, and that if it is against him he must, especially if travelling at speed, act on it at once in accordance with the rules. Up to about the end of last century the rules of several railways in this country still required drivers to be able to stop short of an adverse distant signal, and then, if they could see that the way ahead was clear, proceed prepared to pull up at any point within it. It had become impracticable to enforce such a rule, which had been for some time more honoured in the breach than the observance, and we cannot see how traffic today could be dealt with if our correspondent's proposals were to be adopted.—ED., *R.G.*]

Largest Railway Masonry Arch

4, Temple Fortune Court,
London, N.W.11. August 30

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In your issue dated August 27, on page 230, you state that you believe that the centre span of 181 ft. of the Ballochmyle viaduct is probably the largest masonry arch for railway purposes in the world. May I draw your attention to the Salcano viaduct situated just north of Gorizia in Venezia Giulia?

This viaduct is of masonry throughout and is 660 ft. long. The span of the centre arch is no less than 278 ft. It is approached by three arches on one side and four on the other, of 30 or 39 ft. span. The viaduct crosses the river Isonzo and is on the line from Trieste to Piedicolle. It was originally constructed by the Austrian State Railways in 1905, but during the 1914-18 war the centre arch was demolished. The gap was spanned for a number of years by a Roth-Wagner military bridge, but the arch was re-erected in 1925-6, to the original designs, by the Italians into whose possession the line had passed. The viaduct escaped damage in the late war, and under the peace treaty which came into force last September it was transferred to the Jugoslav State Railways.

Yours faithfully,
P. M. BISHOP

Continuous Brakes for Freight Trains

"The Gyles House,"
Pittenweem, Fife. August 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—While I am somewhat disappointed in the apparent lack of interest in responsible quarters on this subject, on which my previous letter appeared in the July 30 issue, followed by letters from other correspondents in the August 20 issue, I have been able to get a clearer view of the merits of continuous brakes from correspondents who have written to me direct.

It has been made quite plain that continuous brakes could not be used with link couplings, and my correspondents have suggested that screw couplings would have to be used. Should this be the case, I can well understand that there would be considerable delay in marshalling yards, due to having to "muck about" with screw couplings. Moreover, the hazards to personnel would be increased.

I think it might be admitted, however, that both link and screw couplings are out of date and should be replaced with some form of automatic coupling. The American railways have shown the way in this—as far back as 1893 a law was passed in that country making the use of automatic couplings compulsory.

The advantages of automatic couplings together with continuous brakes are so many that it is extraordinary that they have not been adopted in this country. The delays in shunting are negligible, as I know from personal experience in Canada—in fact, I would go so far as to say that switching over there is more easily accomplished and far safer than it is here, and their freight train speeds are considerably higher. The Americans show a spirit of energetic enterprise which seems to be sadly lacking in Britain. They are not afraid of trying out their ideas and adopting them if the experiments are successful.

Now that British Railways are under unified control we have

a splendid opportunity to make progress. Great benefits in operation would accrue, were we to change over to continuous brakes and automatic couplings for all classes of traffic. The problems of conversion are not great and the matter of cost hardly enters into the picture. If the Japanese railways were able to convert 55,000 wagons from non-automatic to automatic couplings in 24 hr., surely we could accomplish the equivalent. We have the ingenuity, but what we must overcome is the fear and dislike of change, as well as the fallacious reasoning that what was good enough for grandfather is good enough for us.

Yours faithfully,

G. RICHARD PARKES

Slowest Non-Stop Run?

85, High Street,
Cheadle, Cheshire. August 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In an age of records, is the following the slowest non-stop run in Great Britain over a period of almost one hour? According to the August issue of the London Midland Region train alteration pamphlet, the 7.50 a.m. *ex* Manchester Exchange to Chester is shown to run as follows on Saturdays:—Warrington, depart 8.33 a.m., Chester—a distance of 19¼ miles—arrive 9.30 a.m. *non-stop*. Average speed, 20 m.p.h.

An additional train is shown to leave Warrington at 8.50 a.m., and in spite of seven intermediate stops, arrives just ten minutes after the "non-stop" at Chester! The Manchester—Chester line *via* Warrington was always slow, but the above train is, I think, the worst yet.

Yours faithfully,

ERIC B. C. DYCKHOFF

Livery of British Railways

8, Crescent Grove,
Clapham Common, S.W.4. July 14

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Many of your readers—and travellers generally—must be considerably amused at "plum and *spilt* milk" as colours for railway coaches! I feel sure that passengers—instead of this "dish" on the *outside* of coaches—would be much happier if the authorities "spilt" a few nice plates of *ham and eggs* inside the coaches—*very* suitable for "interior decoration"!

The following recent extract from the correspondence columns of a newspaper shows what passengers are expected to put up with:—

"Recently I witnessed an amazing piece of effrontery. My 'in-laws' caught a train at Aylesbury and, in company with about 20 other people, they boarded a coach, the rear half of which was empty. No sooner were they seated than a white-coated dining-car attendant came along and ushered them into the front part of the coach—already crowded.

"The attendant then laid a table in the rear half of the coach, and the dining-car staff calmly sat down to what appeared to be a most satisfying repast.

"Now, while I do not begrudge the harassed and overworked dining-car staff their evening meal, it did occur to me that since it is 'our' railway, my father-in-law (who is a capitalist and only works about 65 hours a week) might at least have shared the comfort of one of the 20 or 30 empty seats."

By the way—what is the difference in *colour* between *spilt* milk and milk which has *not* been spilt? Also—why not leave colour schemes as they *are*, instead of *wasting* so much paint (also time and labour)? I should imagine G.W.R. "King" engines feel very "blue" about it!

Yours truly,

PHILIP S. MARTIN

Flashing Light Signals

The Old Schoolhouse,
Lower Basildon,
Goring, Reading, Berks. August 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Your correspondent, Mr. W. H. R. Godwin, in your August 20 issue, must have intended to say "55 times per min.," not "per sec." which is continuous light to all practical purposes.

I had assumed that your issue of August 27 would have contained an acknowledgment of several letters on this point, hence the delay.

Yours faithfully,

MAXWELL TAYLOR

A Suggestion for Tender Lettering

57, Goodmayes Lane,
Ilford, Essex

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—One of my friends, recently returned from a circuitous trip by rail to Switzerland, reports that he saw in Belgium many locomotives whose tenders, instead of bearing whatever is the Belgian equivalent of British Railways, carried such slogans as "Don't Pay Black Market Prices," "Don't Pay More than the Goods are Worth," and so on.

This is most interesting, and an idea which I suggest might be considered over here. Such a vast number of people seem to divert themselves by gazing at locomotives these days that such an opportunity for mass state advertisement on tender side sheets and side tanks should be considered.

The adoption of such an idea would, of course, at one swoop provide perambulating hoardings for more government slogans, variations *ad infinitum* for the "spotter" (". . . that's the first 'A4' I've seen with 'Work or Want' on the tender, George!"); and stop all the idle speculation about what should be painted on British Railways tenders and tanks.

Yours faithfully,

ROY E. VINCENT

[Our readers may recall that a similar idea was adopted by the German Reichsbahn before the war, at the time of the Saar plebiscite, when inscriptions such as "Every German votes 'Yes'," and "The Saar is German," appeared on locomotive tenders.—ED., *R.G.*]

Publications Received

Pressure Die Casting. By "Birmal." Birmingham, 1948: Birmingham Aluminium Casting (1903) Co. Ltd., Birmid Works, Dartmouth Road, Smethwick. Birmingham. 8 in. × 5 in. 64 pp. Illustrated. Price 7s. 6d.—This book sets out to prove, for the benefit of the practical man rather than the technician, that pressure die casting is frequently more economic than other casting methods and can eliminate machining in many uses. Comparison with castings made by other foundry methods is claimed to show that pressure die castings are thinner in section, more consistent in weight, have higher and more regular mechanical properties, and have so smooth a surface finish that they can be left as cast; production rate, moreover, is high. The range of products, almost bewildering in its variety, made by the publishers in aluminium, magnesium and zinc forms strong supporting evidence for claims made. Among those illustrated in an appendix are mechanical toys, gear wheels, aircraft components, electric motor end shields, casings for portable electric drills, conveyor rollers and a motorcar steering wheel. Another appendix contains notes on the technique of pressure die casting, written primarily for the designer. The author repeatedly emphasises the importance of collaboration between technician and designer.

Centenary of the Irish Mail, 1848-1948. By V. Stewart Haram. Published by The Railway Executive, London Midland Region, Euston Station, London, N.W.1. 7 in. × 8¾ in. 31 pp. Illustrated. Paper covers. Price 2s. 6d.—On August 1, 1948, the oldest named train in Great Britain—the "Irish Mail"—completed a century of service and, to mark the occasion, the London Midland Region has published an attractive souvenir booklet. A fascinating narrative tells the story of the Irish mails from the days of the Elizabethan post boys, when the journey from London to Holyhead took 29 hr. in summer and 41 hr. in winter, apart from scheduled stoppages every 3 hr. and the time taken to cross the Conway and Menai Straits ferries. Some 350 years later, the journey throughout, from Euston to Dublin, takes just under 10½ hr. and this booklet, which relates the story behind the achievement, is a fitting tribute to the "Irish Mail's" centenary.

Factory Planning and Installation.—When aircraft factories were dispersed as a defence against air attack during the war valuable experience was gained in speedy dismantling, removal and re-erection of machinery. Much of this work was carried out by Thos. W. Ward Limited, a firm now able to turn experience to good account in the planning of new factories or replanning of old. An illustrated record of some of the removals undertaken during the war is given in this booklet; one example entailed the removal of 400 tons of machinery, products and raw materials, which was begun at midday on Saturday and finished in time for production to recommence on Monday morning.

The Scrap Heap

FISH GUARD

Police will travel on fish trains from Hull to London to stop pilfering.

* * *

Over 6,000 tons of scrap from Singapore, the remains of petrol storage tanks bombed by the Japanese and by the Allies, arrived recently at Swansea for a steelworks.

* * *

A MILLION MORE CALLS A YEAR

Public telephone calls to Euston Station have grown so rapidly recently that the nine operator's positions have had to be increased by another four. A million-and-a-half train service inquiries a year are now being dealt with at Euston compared with a pre-war figure of 600,000.

* * *

A guard chased his train for a mile along the track after he had been left behind at Leigh-on-Sea station one day last week. The train was the 8.24 from Southend East to Fenchurch Street. When it stopped at Leigh-on-Sea the guard got off to help with passengers' luggage. He was still helping when the train pulled out. The guard set off after it, while station officials warned the Hadleigh Box signalman, who held the train up till the guard caught up. The guard did the mile run in 13 minutes.—*From "The Star."*

* * *

CIGARETTES

Forty cigarettes a day is fairly heavy going, but by no means unusual. It is the normal consumption of many men and women, and it costs them 7s. a day, or about £2 10s. a week, which is £130 a year.

A man must earn something like £5 a week to provide himself with these 40 cigarettes alone—still reckoning his income tax at 9s.

But out of every 3s. 6d. he spends the State takes 2s. 10d. Thus he earns the £5 a week, not in order to smoke, but mainly to pay a fine imposed by the Government in an attempt to stop him smoking.

They raise nearly £600,000,000 a year in tobacco duties, which makes the cost of living dearer, and they give £470,000,000 back in food subsidies to make the cost of living cheaper. Is that crazy—or is it?—*From "The Daily Mail."*

Mr. Churchill has given his consent to the renaming of the Romney, Hythe & Dymchurch Light Railway locomotive *Dr. Syn* as *Winston Churchill* before the engine leaves for a tour of Canada in October. Captain J. E. P. Howey, Chairman, hopes that Mr. Churchill will be able to perform the renaming ceremony.—*From the "Evening Standard."*

* * *

100 YEARS AGO

From THE RAILWAY TIMES, *Sept.* 9, 1848

ACCIDENT TO MR. ROBERT STEPHENSON.—At the Conway station of the Chester and Holyhead Railway, on the 30th ult., it was deemed necessary to join another first-class carriage to the train. The porters were in the act of pushing the carriage across the down line, when the express train from Chester was observed to be coming at full speed. The men, to avoid the danger, left the carriage, and, as it afterwards appeared, before it was quite clear of the line. Mr. Stephenson, in company with a friend, Mr. Lee, had previously seated himself in the vehicle. In a few seconds the Chester express train came up at a great speed; the engine caught the projecting corner of the carriage, throwing the whole about a yard from the rails, and smashing the wheels, glass doors, and a portion of the framework. Immediately after the concussion Mr. Stephenson was seen descending the steps, and was observed to fall on his back. It was found that he was much stunned, and rendered almost unconscious by the shock and fall, but in a short time was able to walk. Next morning he left for Chester. Mr. Lee was not injured. Seeing the train approach, he pressed his back and feet to the sides of the carriage, and escaped.

* * *

B.R.'S COLOUR SCHEMES

The public has responded to the Railway Executive's request for views of rail travellers on the ideal colour scheme for rolling stock. Thousands of letters are being sorted by a special staff. Soon after the summer schedules cease next month an announcement is expected to be made.

Throughout the season 14 main-line and cross-country expresses have been switched from one route to another to give every type of rail traveller an opportunity of judging for himself the ideal colour scheme.

At the same time tests have been carried out to determine the durability and utility of the colours chosen—chocolate and cream, maroon, and plum and spilt milk. The experimental locomotives are painted blue, green, and black, all with red, cream, and grey lines.

I understand that the letters, which come from railwaymen, from people who make the study of railways a hobby, and from the travelling public, show a preference for the old G.W.R. colours, chocolate and cream, for the coaches. But they prefer black for the locomotives.—*"Peterborough" in "The Daily Telegraph."*

* * *

THE STRANGE CASE OF THE DEPARTED SPIRITS

If there is one thing, more than another, that British railway chemists know a lot about, it is drinking water. They have to, because the railways control more drinking water supplies than any other authority in the country.

The London Midland Region of British Railways alone supplies towns, including Crewe, with water, as well as many hotels, stations, and thousands of houses situated in rural areas.

When a consignment of whisky was uncorked, and it was found that the bottles contained only water, the L.M.R. put their chemists, retorts, test tubes and all, on the scent of the vanished whisky. The chemists found that the water was of Irish origin.—*From the "News Chronicle."*

* * *

Mr. G. W. Stewart, District Superintendent for British Railways at Lincoln until his recent appointment to Manchester, told this story at the W. H. Smith centenary lunch in Lincoln. A train from New York to San Francisco was running late. It was not merely hours late, or even days late, it was weeks and months late. Eventually one woman asked the conductor when he thought they could expect to arrive in San Francisco. "I'm sorry, madam," said the railwayman, "I can't tell you whether it will be this week, next week, or next month." Hearing this the passenger looked aghast. "But if we don't get there soon my baby will be born," she said. "Madam," said the conductor, looking at her severely, "You should never have boarded the train in that condition." To this the woman replied "I didn't."—*From the "Lincolnshire Echo."*

* * *

TAILPIECE

(Passengers in a Southend-Fenchurch Street fast train stood and cheered while the guard sprinted a mile and a quarter after it)

Quite lately did a London train
Some merriment afford,
By stealing out upon its way
Without a guard on board.

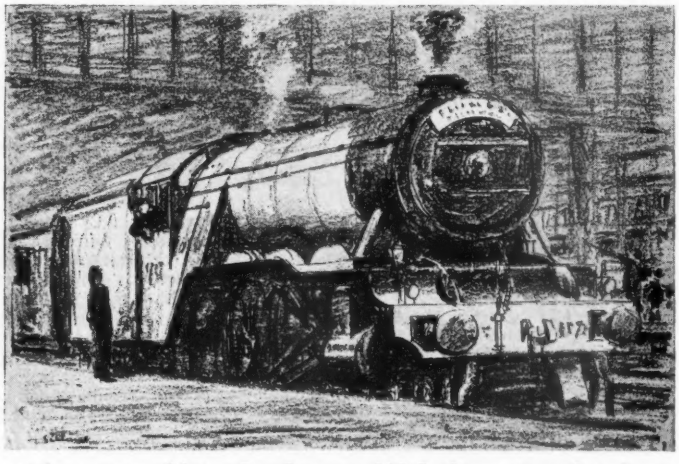
The guard, poor man, was left behind—
With luggage he was busy—
But in Olympic style he raced,
And ran till he was dizzy.

Pursuing for a mile and more
Along the track he hurried,
Until he caught up with the train,
Though looking rather flurried.

A full mile and a quarter thus
Triumphantly completed,
The guard deserved the cheers that rose
From passengers unseated.

The running foreman we have known,
But here's a faster man—
The sprinting guard who moved with speed
To catch up with his van.

W. E. N.



"As a matter of fact, when I was a kid I always wanted to be a civil servant"

[Reproduced by permission of the proprietors of "Punch"

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Johannesburg Station Improvements

Improvements to Johannesburg Station, estimated to cost £6,270,100, have been allocated a further £300,000, to be spent in the current financial year. The total expenditure on this work to March 31, 1948, was £1,542,442. The present Johannesburg Station was completed in 1932, but, within ten years of its completion, congestion was again apparent on the operating side. In 1942 a special committee, representing the Johannesburg City Council and the Railway Administration, was appointed to examine various proposals for a new station.

The necessity for expropriating the Wanderers Sports Ground for the new station caused an acrimonious controversy and in 1945 General G. S. Szlumper, a former General Manager of the Southern Railway, who was invited to the Union to advise the South African Railways Administration, advocated the expropriation of the whole of the Wanderers grounds for this purpose, which was carried out, subject to compensation.

The area of the new station, with the administrative and technical blocks, will approximate 28 acres. The layout will provide for ten suburban and six main-line platforms in addition to special platforms for luggage and parcels traffic and two through goods tracks. The lowering of the present tracks will enable all road bridges to pass over the new station without steep approach ramps. Modern concourses for suburban and main-line passengers will be located immediately above their respective platforms. These concourses will abut on the forecourt and adjoin a large restaurant at the northern end of the station.

This separation of suburban and main-line passengers, and direct access from concourses to platforms, will relieve congestion on the platforms. Non-European passengers will be accommodated at the eastern end of the station where they also will have separate concourses for suburban and main-line platforms. North of the station, facing Wolmarans Street, will be erected two large administrative blocks providing accommodation for the General Manager's office and the technical staff respectively. These buildings will enable all railway staff to be concentrated and end the present position in which departments are scattered in various buildings in the city.

RHODESIA

Record of Working Results

Receipts for May (including the Vryburg-Bulawayo section) totalled £736,619, the highest figure on record. Other records established on the lines north of Bulawayo during the same month were train miles 561,486 and gross ton miles 366,072,000. Expenses amounted to £547,671, leaving a net operating revenue of £188,948, which was the best monthly figure since October, 1946.

Beira Port Concession

The Portuguese Government has notified the Port of Beira Company that the port concession has been denounced and will be redeemed under the terms of the original contract and the principles of the Portuguese Colonial Act, the handing over to the administration of the colony to be effective from January 1, 1949. Both the management and method of working the port and the Beira Railway have an important bearing on the economy of Rhodesia, and it is hoped that there will be the least possible disturbance of the present central control and programming of shipping using the port. The latter was introduced recently at the instigation of the Rhodesia Railways, and has already achieved noteworthy results in relieving long-standing congestion at Beira.

UNITED STATES

Operating Incomes

Net operating income of the 132 Class 1 railways in the United States for June was $124,979,063, or more than double the $61,249,090 reported for June, 1947. A reduction in social security payroll taxes and rate increases contributed toward the higher June figures. Estimated net income of the railways, after interest and rentals, was $94,000,000 in June, against $44,000,000 in June last year. The reduction in payroll taxes levied on railways for unemployment and sick benefits accounted for about one-quarter of the net railway operating income for June. The remaining three-quarters of the increase resulted from rises in rates, passenger fares and mail authorised during the past year. Net railway operating income for the first half of 1948, before interest and rentals, totalled $410,900,000, against $373,800,000 for the first six months of 1947. Net income after interest and rentals is estimated at $259,000,000 for the first six months, against $225,000,000 in the same period last year. The Class 1 railways earned an average rate of return on property investment of 3·6 per cent. during the 12 months period, the rate being 3·7 per cent.

ARGENTINA

Abandonments Foreshadowed

In a recent speech made in Rosario, Señor Miranda, President of the National Economic Council, declared that the recently-acquired railways were losing 1,300,000 pesos a day, and that it might be found necessary to lift 40 per cent. of the existing tracks, as they could not be operated at a profit. In their place, traffic would be diverted to new roads to be built out of the proceeds of an increase in the price of petrol, and to navigable rivers.

New Transandine Railway Proposal

It is reported from Chile that there is a revival of interest in the scheme for a third transandine railway which would link the Argentine port of Bahía Blanca with the Chilean ports of Talcahuano, Lebú and Saavedra. Its principal advantage is that the highest point would be only 1,380 metres above sea level, and it would not therefore be liable to be blocked by snow in winter, as are the Mendoza - Santiago and Salta - Antofagasta lines.

Address by Secretary of Transport

The Secretary of Transport, Lt.-Colonel Juan F. Castro, has addressed a message to all workers employed in the transport industry, appealing for their unstinted collaboration. He stated that Argentine transport was passing through a phase of acute crisis, arising out of a combination of circumstances over which it had no control. To overcome the crisis as soon as possible it was necessary for each worker to give of his best in a spirit of unselfish patriotism. Some of the measures to which he referred as being essential were a stringent economy in administration; abolition of all free services; thorough co-ordination of all means of transport; speeding up of goods traffic; complete remodelling of all transport organisations; and an increase in working hours.

CHINA

Construction of Coalfield Branch

Work began on May 1 on the construction of a branch from the Canton-Hankow Railway in the north of Kwangtung Province to serve the Kouyatung coalfield. The deposits here are among the richest in the province, and are said to be sufficient to serve the needs of the railway for 40 years, in addition to the industrial needs of the entire province.

ITALY

Progress of Railway Reconstruction

According to particulars recently released from official Italian sources, the reconstruction of war-damaged lines of the Italian State Railways is making satisfactory progress. By the end of March last, only 6·3 per cent. of the damaged formations had not yet been dealt with, and tracks to be relaid amounted to 6·2 per cent. of the total mileage which had been destroyed or wrecked. At the same date, only 14 per cent. of the destroyed or damaged station buildings were still awaiting reconstruction or repairs, and 16 per cent. only of the destroyed or dismantled electric overhead system had still to be replaced.

The renewal of the rolling stock is also making rapid headway. The programme for the coming 20 months envisages placing in service 120 new electric locomotives, 80 electric railcar sets, and 150 diesel railcar sets. In recent months, a number of up-to-date second and third class bogies coaches was placed in service, and some 1,300 units of the same types, in addition to 9,000 goods wagons, are to be completed within the next few months. It is believed that the reconstitution of the Italian State Railways will allow it to surpass its pre-war efficiency by 1951 at the latest, provided the present vigorous drive can be maintained.

FRANCE

Record Holiday Departures from Paris

On Sunday, August 1, more than 800,000 passengers left by main line trains from the Paris termini. This total beats all pre-war and post-war records. In the first four days of the holiday period, main line trains from the Gare de Lyon carried 203,200 passengers, against 113,800 in 1947. Many trains were run in duplicate and some in triplicate, and on July 30 and 31, as many as six trains were run each day to cope with the rush of travellers by the "Rapide 59" from Paris to the Riviera. Frequently several special vans for bicycles were required in the make-up of the trains and, according to newspaper reports, sometimes whole trains of bicycle vans were formed. Formerly the peak date for holiday travel was August 15, but this year the railway bookings show that the peak came on August 1.

A Rapid Transit System for Glasgow

Map of the Glasgow area, showing railways recommended for electrification, and proposed rapid transit lines

A Rapid Transit System for Glasgow

Proposals for electrification of steam-operated railways, and construction of new lines

IN March, 1947, the Sub-Committee on Finance & Works of the Municipal Transport Committee of Glasgow was instructed to consider the advisability of extending the underground railway to the East End of the city. Acting on these instructions, Mr. E. R. L. Fitzpayne, General Manager, Glasgow Corporation Transport, prepared a report, which was presented in May last. He considered that any extension of the underground was bound up with the whole future of the city's transport, and his report is therefore a plan for the ultimate development of passenger transport in Glasgow.

The proposals, which are linked with the City Engineer's First Planning Report, already adopted by the Corporation, involve the development of a rapid transit system of electric railways in the city and suburbs, comprising (1) the electrification of steam-operated underground and surface railways; (2) the construction of new tunnels and surface railways for electric trains; (3) the provision of feeder road services, which will not enter the centre of the city.

The existing circular underground railway—the former Subway—does not form part of the proposed system, as it is built to narrow dimension, and to a gauge of 4 ft. It is considered that its modernisation and adaptation would be too costly to be warranted, and it would therefore remain in its present form, except that the stations at St. Enoch, Buchanan Street, Merkland Street, and Kelvin Bridge would have interchange facilities with the new system.

Although in the First Planning Report it is envisaged that the present tramway system is eventually to be superseded, the proposed rapid transit system will combine the best features of the tramways with those of an underground railway. In his report, the General Manager has borne in mind the reports on rapid transit systems proposed or under construction in Montreal, Chicago, and Toronto.

Electrification Proposals

The main lines which radiate from the four termini (Central, St. Enoch, Queen Street, and Buchanan Street) have not been included in the project, as it is presumed that they will be required in the future for long-distance traffic. The City Engineer envisages the merging of Central and St. Enoch, and Buchanan Street and Queen Street Stations in new South and North termini respectively.

The following lines, with other subsidiaries, have also been excluded, as they are used to full capacity for medium distance traffic:—

(1) Jordanhill to Clydebank, Dumbarton and beyond;

(2) Bellgrove to Coatbridge, Airdrie and Bathgate, *via* Carntyne;

(3) Paisley Canal Line, *via* Crookston, to the coast.

The steam-operated suburban lines which it is proposed to include in the scheme are:—

(1) The former L.N.E.R. line from Maryhill to Queen Street (Low Level) *via* Anniesland, Partick, and Charing Cross, and thence to Alexandra Parade, with the three terminal spurs to Hyndland, Whiteinch, and Bridgeton Cross;

(2) the former L.M.S.R. line from Central (Low Level) *via* Partick West, Maryhill, Possil, Stobhill, and Camlachie, to Rutherglen, and thence back to Glasgow *via* Bridgeton Cross. With this route is included the line from Stobcross to Kelvin Bridge, Kirklee, and Maryhill. An extension of the electrification from Partick West to Clydebank and Old Kilpatrick is recommended for consideration at a later stage.

(3) The Cathcart Circle.

(4) The line from Cathcart to Whitecraigs. A connecting service to Clarkston and East Kilbride could be provided *via* the existing spur near Williamwood.

(5) The line from Mount Florida to Bridgeton Cross and Central (Low Level) *via* Kirkhill and Carmyle.

There are suitable terminal stations at various points on the routes selected, and a multiplicity of junctions and connecting lines, which would enable a complex system of services to be developed, giving rapid transit to the adjoining areas. This part of the scheme would, in fact, provide adequate facilities for most of the north-western and south-eastern districts.

Rapid Transit Lines

For the north-eastern and south-western districts, the following new lines would be required:—

(1) An underground railway linking the proposed new north and south main line stations, paralleling and interchanging with the existing Corporation Underground.

(2) From the new North Station, it is proposed to extend the above line eastward along the Edinburgh Road to the Queenslie industrial estate, and then in a wide sweep to Tollcross, where it would join the existing railway from Cathcart to Carmyle and Bridgeton Cross (one of the routes recommended for electrification).

(3) From the new South Station, an extension of the central connecting line would run southward and westward to Pollokshields, Pollokshaws and Barrhead. A branch from this line would run from Shields Road to Ibrox and Paisley. A connection with the Cathcart Circle would be provided, to link that route with the new North Station.

(4) To serve the area west of Anniesland, a line would follow the Great West Road, through Knightswood, and Drumchapel, to Duntocher. In the first instance, it is proposed that this route should branch from the existing railway at Botanic Gardens, but, at a later stage, it could be extended eastward from Kelvin Bridge, to join the proposed Queenslie line at the new North Station.

To meet probable development in the northern outskirts of the city, a later stage in the scheme includes a similar line from Maryhill to Bishopbriggs.

About six miles of the new lines, chiefly in the central area, would be underground, but elsewhere the railways would be constructed at street level. On the arterial roads, they would occupy the central space between the two carriageways, and the stations would be approached by pedestrian overbridges. Quite elaborate stations, at intervals of half to one mile, are proposed on the surface routes. The platform edge would be enclosed by glass partitions, with power-operated doors arranged to be opposite the car doors when the trains have stopped.

Twin tunnels are proposed on the underground sections, as they permit of a smaller constructional depth, and are more easily adapted to variations in level required by local obstacles. Moreover, they are considered to have advantages on the score of safety, especially if passengers have to leave a train in a tunnel in an emergency.

Track and Rolling Stock

Flat-bottom rails, with welded joints, are considered most suitable for the new railways, and 600-volt d.c. third-rail electrification, with the conductors outside the running rails is proposed. The ruling gradient would be 1 in 30, and the minimum radius for curves 1,000 ft. Stations might be situated so that advantage could be taken of the gradients for quick starting and stopping.

Automatic three-aspect colour-light signalling is proposed, with a minimum of two block sections between stations. It is intended that a headway of 44 sec. should be attained, and that the frequency of service, combined with the average speed, should be higher than on any other suburban service. By running trains in groups of three on the skip-stop principle, the maximum acceleration is assured, and at the same time the maximum waiting time for a through service to any station on the route is reduced to 2 min. 11 sec.

It is planned to use air-smoothed eight-wheel cars, 45 ft. long over the frames, and 9 ft. wide overall. Each car would provide seats for 48 passengers, and standing accommodation for 17. The cars would run coupled in pairs, with corridor connections, but multiple units of up to three pairs could be used. Automatic couplings, and electro-pneumatic remote control from each end of the train, would be used for multiple-unit operation.

It has been decided that the best results will be obtained with trains capable of a maximum speed of 42·5 m.p.h., with maximum acceleration and deceleration rates of 6·3 ft./sec./sec. This would allow of an average running speed of 25·6 m.p.h., with stops of 8 sec. duration at stations half mile apart. By comparison, the suburban bus averages about 15 m.p.h.; the city bus 11·18 m.p.h.; and the trams 9·31 m.p.h.

ELECTRIC LOCOMOTIVE WORKS FOR INNSBRUCK.—As a result of the seizure by the Russians of the works and plant of Oesterreichische Brown Boveri A.G. (a subsidiary of the Swiss Brown Boveri Company, of Baden) which contributed largely to electric locomotive building in Austria, it has been decided to convert the Innsbruck sales branch of the company into a new concern to be known as Neue Oesterreichische Brown Boveri A.G., and to begin production there. The 12-year electrification plan of the Austrian Federal Railways envisages the eventual placing in service of 600 locomotives, apart from the construction of new power stations. The decision to begin operations at Innsbruck was reached after various representations for the release of the Vienna works has proved of no avail. Innsbruck is situated in the French zone of occupation.

Rheostatic and Regenerative Braking—3*

Applications with compound and series d.c. motors

By B. J. Prigmore, M.A., A.M.I.E.E.

THE d.c. analogue of the induction motor is the shunt motor; by field variation it can be made to give regeneration over a wide range of speeds, having a constant speed for any one field setting. Its unsuitability for haulage purposes results in it not being used in simple form. With a cumulative series winding (for motoring) so as to give an appreciable rate of torque increase with current increase, the resulting compound motor becomes suitable for regenerative braking. On increasing the field until the motor e.m.f. exceeds that of the line, regeneration will occur.

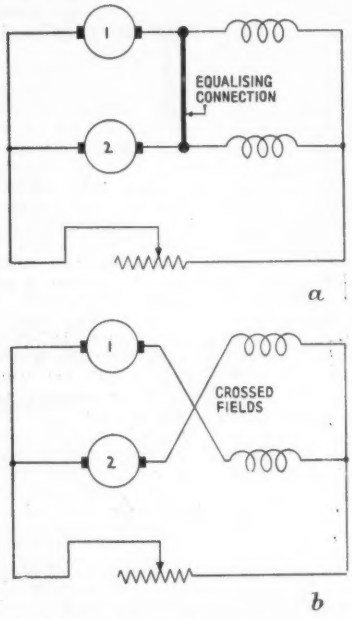


Fig. 5 (a and b)—Rheostatic braking with motors acting as generators in parallel

The regenerated current, passing through the series winding, will reduce the motor field flux, hence its e.m.f. and so limit the regenerated current. This self-stabilising feature renders the compound motor very suitable for regeneration. In this form it is used on some trolleybuses, to which it gives about 1 m.p.h. per sec. deceleration down to 12-14 m.p.h. (which speed is the minimum speed with maximum shunt field).

Transfer to rheostatic braking (with the same current-limiting characteristic) down to very low speeds is possible. Complexity of vehicle equipment, added to the need for allowance being made for overvoltage and reverse current, in relation to the small amount of energy recuperable even on suburban services, have resulted in many recently-built trolleybuses using the simple series motor with rheostatic braking only.

Such rheostatic braking has long been a feature of tramcars. To obtain it, the motors are connected, with reversed fields, to the rheostats. The motors then build up as series generators, action being initiated by residual magnetism in the fields. Though a customary feature of tramcar equipment, rheostatic braking is not generally used for service braking on modern cars. Satisfactory parallel operation of the series generators is obtained by the use of equalising connections (as in Fig 5a) or crossed fields (Fig. 5b). Experimental equipments now in service in Glasgow and Blackpool use rheostatic braking in service, smooth stops being obtained by the use of multi-point resistance controllers actuated by pilot motor under the control of current relays; similar equipments are in use on the new rapid transit trains operated by the Chicago Transit Authority.

Regenerative braking on series-motored d.c., locomotives may be obtained down to medium speeds by line-exciting the motor fields in series through some of the starting rheostats, with another resistance in the armature circuit, as shown in Fig. 6. On a four-motor equipment, parallel, series-parallel, and series armature connections may be used; the series connection as shown gives the minimum speed. Regeneration by this means becomes pointless when the regenerated current I_g becomes less than the exciting current I_f; the loss due to I_f much reduces the efficiency of this form of regenerative braking.

An advantage of this circuit lies in the ready change to rheostatic braking (by switching to the load resistance *R*) should the line voltage fail. This scheme is

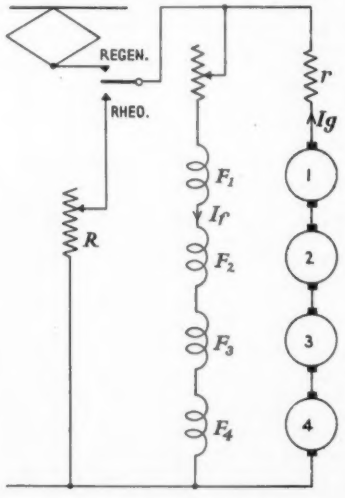


Fig. 6—Line-excitation of series motors for regeneration, with stand-by rheostatic braking

adopted on the locomotives of the steeply-graded Montreux-Bernese Oberland Railway in Switzerland, resistance *r* being incorporated to limit the regenerated current should the line voltage suddenly decrease appreciably.

The most usual method of obtaining regenerative braking on d.c. locomotive makes use of a separate exciting dynamo to energise the motor fields; this dynamo may be driven by a small motor or from an axle of the locomotive. Sometimes one of the traction motors is used as a self-excited series generator to excite the fields of the remaining three or five motors. The degree of regeneration is controlled by variation of the exciter field, whilst stability of regenerated current with voltage surges is obtained by the use of stabilising resistances or a differential field winding on the

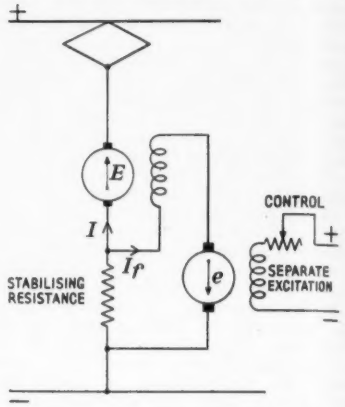


Fig. 7—Regulation of regenerated current by stabilising resistance

exciter, which winding carries the regenerated current.

The scheme used on the 1,200-h.p. 3,000-volt d.c. locomotives of the South African Railways incorporates a separately driven and separately excited exciter. The circuit, shown in Fig. 7, is arranged so that the field current as well as the regenerated current passes through the stabilising resistance; the voltage drop due to this latter thus opposes the exciter voltage.

Should the line voltage decrease, then the regenerated current will increase; the voltage drop across the stabilising resistance will increase, less voltage will be available across the motor fields, and therefore the exciting current will fall, as will the motor e.m.f., so that the regenerated current will be prevented from excessive increase on line voltage decrease, and *vice versa*.

(To be continued)

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* Previous parts of this article appeared in our April 23 and June 18 issues

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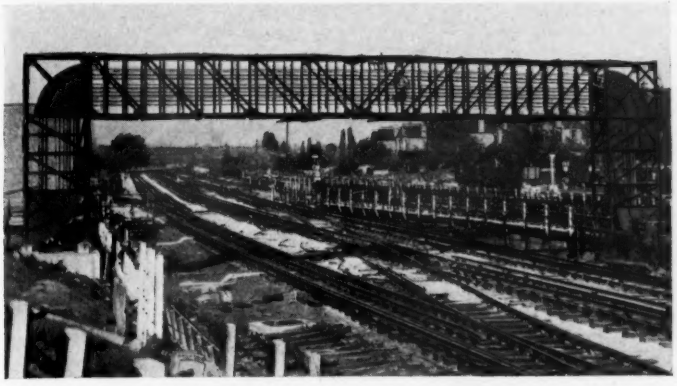
BROWN BOVERI TRANSMISSION FOR BELGIAN LOCOMOTIVES.—In connection with their main-line electrification plans (see our issues of March 7 and August 15, 1947), the Belgian National Railways have ordered three 4,000-h.p. locomotives with transmission similar to that of the Lötschberg machines described in our issue of August 16, 1946. The Belgian locomotives are for the 3,000 V. d.c. system and will weigh 81 tons, as compared with the 80 tons of the Lötschberg locomotives, which represented the first occasion on which a horsepower of 4,000 had been achieved with such a low overall weight. Both designs are of the Bo-Bo type, the two motors in each power bogie being coupled to the driving axles through the Brown Boveri disc type of transmission described in our August 16, 1946, issue. The Belgian locomotives are designed for a maximum speed of 77½ m.p.h. Their mechanical components are being supplied by the S.A. Des Forges, Usines, et Fonderies, Haine St.-Pierre, Belgium.

London Transport Cable Bridge Design

Considerations of design for structures to carry traction, high-tension, and signalling cables across electrified tracks



Cable bridge at Harrow with 60-ft. clear span and 24 cable ways crossing three main-line tracks

RECENT extensions of the surface lines of London Transport are on or adjoining existing lines which previously have been worked by steam. The supply of electric power and the signalling for close headway working necessitate the provision of numerous runs of electric cables. These runs frequently have to cross the tracks, particularly at junctions, in depots, and at station goods yards. From considerations of accessibility for maintenance, such crossings generally are made overhead in preference to underground, and, in consequence, bridges are required.

Since the war 18 additional cable bridges have been required. The design of these structures involves some interesting problems. The cables are hung from brackets on posts on one or both sides of the line. The posts are 4 ft. apart, and the larger cables span between the posts. The smaller cables require support at 2-ft. centres, obtained by using an intermediate bracket designed to hang on the compressed air supply main, which is a 1½ in. dia. galvanised pipe and always occupies the top way of the post brackets.

The signal cables, ⅝ in. dia., are laid together, up to a maximum of 21 in a single way. The larger cables for traction current, 2¼ in. dia., and for H.T. transmission, up to 3½ in. dia., are supported singly. The layout of these cable runs is planned carefully to give a pleasant, tidy appearance, with long straights and smooth curves.

Cable Run Requirements

There are numerous requirements to be considered in the design of a cable bridge. The base should connect with the post runs so that some cables may pass by the bridge and others run on to the bridge with smooth curves in a regular manner. The relative position of the cables must not change in passing over the bridge. Those on top on one side must be on top on the other.

The signal cables laid together in one way must remain in the same relative position without reversal. The cable laid first at the bottom must still be at the bottom when it has crossed the bridge. Cables must not be bent to a radius sharper than that specified for each kind.

In many, but not all, cases an access walkway to the bridge is necessary. In some cases cables leave the bridge at an intermediate pier, which may not be at the centre of the bridge. Proper clearances from the rail tracks must be maintained, and the structure of the bridge must be adequately stiff and simple to erect and to maintain.

Protection from Steam

Finally, the cables have to be protected from damage by blast from the chimneys of engines on goods or works trains, and the appearance must be satisfactory.

To meet the first requirements enumerated, the ideal structure would consist largely of a series of curves, but the resulting forces and moments could not be provided economically for in such a design. Moreover, in cases where a walkway is required, provision must be made for a man to walk or climb erect.

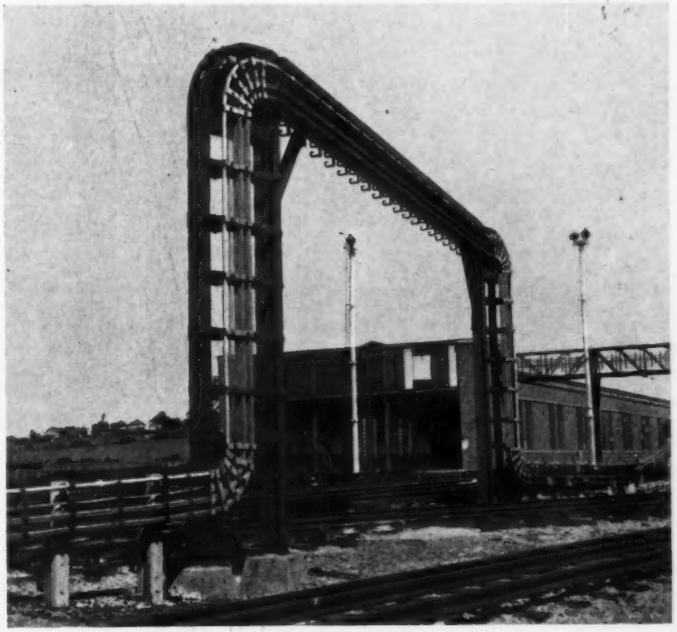
For structural simplicity and for economy in material, a beam or light lattice girder on vertical columns is the solution, but the cables cannot make a sharp turn between the columns and the beam, nor at the foot of the columns.

Achieving Good Appearance

For appearance, projections beyond the sweep of the cables should be avoided, and the structure should look light and simple. Cases where a double span is required are the most difficult to design with a good appearance, particularly where the spans are unequal in length or in the number of cables carried. In some cases, this last difficulty can be avoided by providing two separate bridges of similar outline but of a different width.

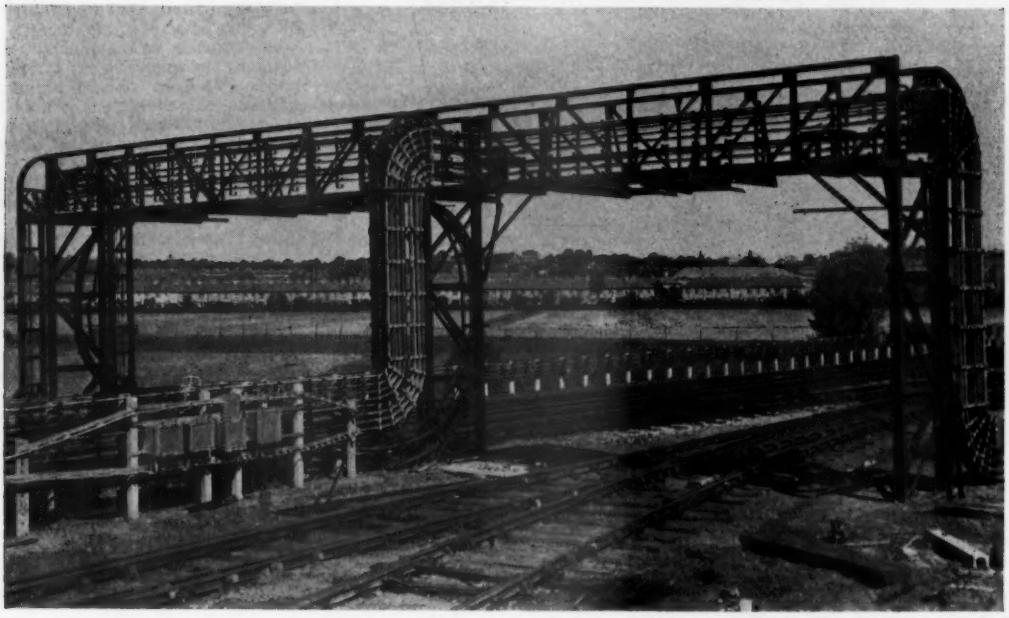
Careful attention to detail, the use of welding in some cases for shop fabrication, and the pressing of sections to curved shapes, has enabled great economy to be achieved in the weight of steel required and, at the same time, a pleasing appearance has been obtained.

NEW LOCOMOTIVES FOR SWISS FEDERAL RAILWAYS.—Swiss manufacturers recently secured a number of important orders for electric locomotives and other equipment. Orders placed by the Swiss Federal Railways for electric locomotives total fr. 14,900,000 (approximately £858,780). They comprise 14 high-speed lightweight locomotives of Class Re "4/4"; two heavy shunting locomotives of a new type with six driving axles and no carrying axles; and four lighter shunting locomotives with three driving axles and no carrying axles.

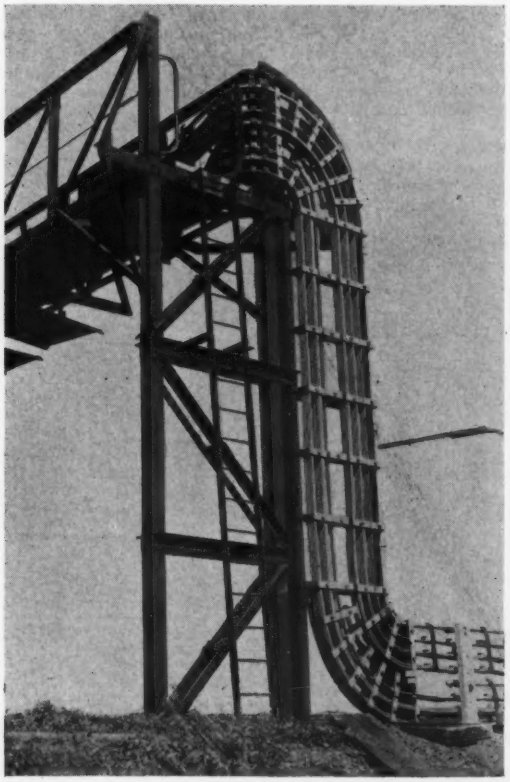


Skew bridge with 40-ft. span and eight signal cable ways crossing tracks at Hainault Depot

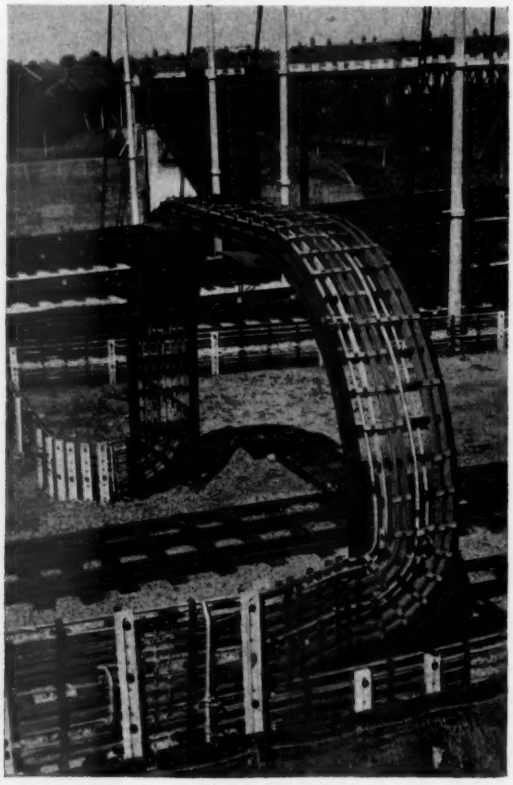
London Transport Cable Bridge Design



Two-span bridge crossing main line and siding connections at Fairlop. The signal cables are carried vertically on the girders, while the L.T. cables, seen on the left-hand span, follow larger radius curves and are attached to the floor



Transition of cables from lineside supports to the Fairlop bridge span (see above)



Cable bridge carrying eight signal cables across two tracks at Newbury Park

The South African Railways Staff College

A university for railwaymen is now approaching completion in the Transvaal

By Colonel W. R. Gordon, O.B.E.

One of the covered colonnades between the blocks

THE South African Railways Staff College at Esselen Park, between Johannesburg and Pretoria, now under construction, is expected to operate at its full planned capacity within three years. At present 250 trainees are under instruction in buildings already erected, and 920 other students are being taught at Kroonstad in the Orange Free State where they are temporarily housed. Eventually 1,200 students will be trained at Esselen Park.

The staff situation on the South African railways shows that, to maintain a total European staff establishment of 93,000, it is necessary to replace wastage and train 6,000 to 7,000 men annually. The training of this number every year will be the task of the instructional staff at Esselen Park. Already, in the three years in which the College has been working, 9,000 men, mostly ex-service, have received training at Kroonstad or at Esselen Park.

The categories of trainees now at Esselen Park are three in the Commercial Section, two in the Operating Group and two in the Platelayers' Section. Clerical personnel dealing with railway accounts, checkers, and ticket examiners make up the Commercial Section. In the Operating Group come guards and shunters, and permanent way inspectors and platelayers comprise the last category. The courses for platelayers, station accounts clerks, and guards last 3½ months, and those for checkers 3 to 3½ months. Already, the instruction given is saving the railways large sums in claims for loss, damage, and delays of goods in transit. Catering trainees, who actually work in the kitchens of the mess hall of the College, receive practical training lasting six months. The shortest courses are for shunters and ticket examiners, which last six weeks and two months respectively.

At Kroonstad are still to be found most of the courses where models, electrical gear, and outdoor instruction are required. When Esselen Park is ready the £25,000 worth of equipment now at Kroonstad will be moved thither. There are still at Kroonstad sections covering training in administration, catering, communications, operating, police, road motor transport, and steam engine men, with miscellaneous activities including health, hygiene, and first aid. The administrative section includes stenographers and pay clerks. Catering, for Europeans, covers cooks, stewards, and storemen. Coloured students are also trained as bedding attendants and scullions, but, when Kroonstad is closed and the whole establishment concentrated at Esselen Park, they will receive instruction at Braamfontein, the headquarters of the Catering Department of the S.A.R.

In the Communication Section are the apprentice electricians who, during their five years' training, receive alternate instruction on their own system and at the College, to which they return for periods up to 16 weeks a year to gain further instruction in the theoretical side of their work. Electricians who have already passed their apprenticeship stage, telegraphists, and operatives also receive courses in the Communication Section. The Operating Section takes the learner station foremen under its wing. Both European and non-European police are trained, the former in a six months' course and the latter for two months. Refresher courses for European N.C.Os. and for native policemen are also conducted. Firemen, station foremen, and communications personnel stay at the College for 3½ months, and the road motor drivers undergo a course in 2½ months. Even so, the syllabuses are so "packed" that it is not easy for all trainees to get through them in the allotted time. Consideration is being given to an extension of the time allowed in some courses.

Choice of Instructors

The greatest possible care has been taken with the choice of instructors. Apart from the Principal, Mr. H. P. J. Lyell, and the Vice-Principal, Mr. H. J. Dreyer, who are educationists, all the teaching staff have been drawn from the different departments of the railway. In South Africa, where English and Afrikaans are both official languages, all instructors must be fully bilingual. A selection board, consisting of a Chairman, the Principal of the College, and two experts in the particular subject which the instructor will have to teach, give each candidate a fifteen- to thirty-minute interview at which points are awarded for knowledge of the subject, bilingualism, personal appearance, and so forth. The first question is generally to ask the candidate to give a lecturette to the selection board on some aspect of what he will have to teach. Two or three of the best men are then sent to the College for a probationary period of one or two months. Only then is the final selection made. This care has been well repaid by the results, for men so chosen, with no previous teaching experience, have turned out first-class instructors.

Mr. H. P. J. Lyell, Principal of the S.A.R. Training College

Though both the Principal and Vice-Principal give, from time to time, lectures on methods of teaching, they would be first to admit that enthusiasm has been the keynote of the success achieved. No instructor is held back from promotion because of his membership of the College teaching staff: on the contrary, not only does the work bring the teacher into wide contact with varied aspects of railway administration but his appointment is con-

sidered as a mark very much in his favour.

The selection of students lies in the hands of the nine "System" Managers of the South African Railways. Trainees are, in the main, men who have served at least two years in the railway service, and are all volunteers; those who apply are, if suitable, nominated for courses. Each System has an allocation of students for particular courses notified well in advance of the date the courses commence. Trainees vary in age from 18-19 years in the case of police recruits, apprentices, and catering staff, to over 35 years in the case of the platelayers. On arrival they are set a questionnaire to help in determining which class they shall join, a step necessitated by the different levels of intelligence and general education among trainees. Mother tongue may also create a division, making it more suitable to teach some men in Afrikaans rather than in English, and *vice versa*. The instructors prepare their own lectures based upon the various railway handbooks.

Training in screwing for platelayers' class

In class teaching the blackboard is very much in evidence. Notes are not dictated until the subject has been thoroughly explained and demonstrated on the board. Where suitable handbooks are not available lesson notes are prepared and given out in the form of bound notebooks. Films are used in the Communication Section at Kroonstad for basic electrical theory, but it will be necessary, in most departments, for specialised films and film strips to be made and formed into a library. The classrooms, especially at Esselen Park, are excellent. At present classes average 20 students but, for the future, it is hoped to be able to reduce this number, in some categories, to sixteen.

Careful progress reports are kept and each student is reported upon by the instructor fortnightly. At the end of each course trainees must obtain 80 per cent. of marks for a pass, except the police and platelaying sections, where 60 per cent. is sufficient. Although oral tests have been made and still are used, opinion is inclining more and more to written final examinations. In this way the student's nervousness is reduced to a minimum. Special examiners attached to the staff of the General Manager conduct the final tests. This policy of employing examiners outside the College staff ensures that results are reached without fear or favour.

Not all trainees pass the final test. Recent accounts classes, nevertheless, showed "passes" secured by over 90 per cent. of students. Amongst platelayers, lately examined, there were only two failures out of fifty trainees. Reports from the Systems on past students show a general level of satisfaction among railway executives. In time it is hoped to obtain more definite post-graduate reports on trainees.

The ex-Minister of Transport, Mr. Sturrock, stated, at the laying of the foundation stone at Esselen Park, that, if the college could improve efficiency by 5 per cent. only, it would pay for itself over 15 years. Mr. Lyell and his colleagues reckon that much greater efficiency is being obtained. If this improvement can be maintained the college will pay the South African Railways a handsome dividend.

View of the train operating hangar

A brief résumé shows how the steam drivers training section receives and handles its students. A lad wishing to become a locomotive driver is graded as a trainee fireman, and after a minimum period of six months in a running shed is allowed to sit for the preliminary fireman's examination. After being graded as a fireman, he must, within three months, pass the final fireman's examination. Both these examinations are oral tests of the candidate's knowledge of the more important of the train working regulations, particularly the observance of fixed signals and hand signals, with his knowledge of a fireman's duties.

After serving a minimum period of five years as a fireman on the footplate he may, if vacancies exist, enter for the driver's examination. This is, at present, where the Railway Training College comes directly into the picture, as most eligible candidates are sent there for a course lasting a little over three months, but correspondence courses are contemplated to cover the first four years of the fireman's service.

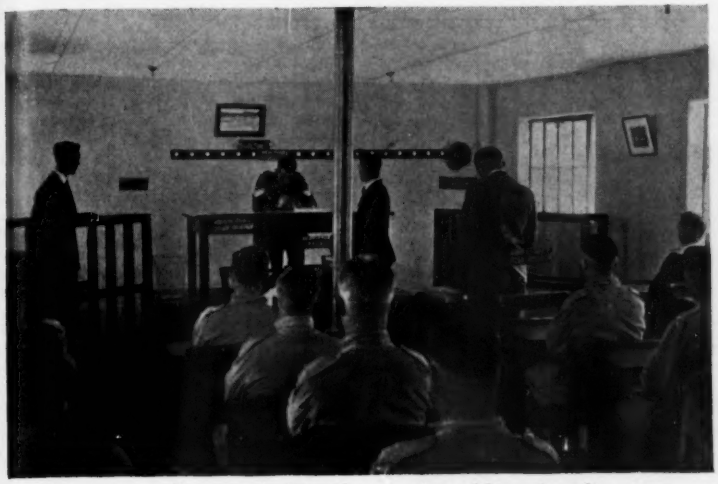
The students are given an intensive course in all aspects of the train working regulations and other standing instructions which apply to locomotive drivers. They also receive instruction in the working of the various parts of a steam locomotive, in how to locate faults and deal with them. Each class is combined once a week with the station foreman students in the train working hangar, where the driver students function as train crews. During the course the students are taken to the Kroonstad running shed, and given demonstrations on locomotives. They also see various parts stripped for repairs. Twice during the course every student does a trip on the footplate of a large locomotive hauling a heavy goods train, when he is given instruction in the handling of the locomotive. The instructors, of whom there are ten in the classrooms and two on the footplate training, are all ex-drivers, specially selected for the work.

After completing the course at the College, the students are examined in their knowledge of the regulations and instructions, and of the locomotive. The examinations are conducted by inspectors attached to the Chief Mechanical Engineer's Office, and are entirely oral. The examination is divided into two main parts, each of which takes an average candidate from three to four hours. The students who pass the examination are graded as Passed Firemen, and are in due course promoted to the grade of Driver, Class II, as vacancies occur.

European police recruits, whose course lasts six months, study South African criminal procedure, common and statute law and receive instruction in police duties, railway regulations, methods of railway working, the investigation of claims and

crime. They are also taught foot and rifle drill, musketry, fire-fighting, physical training (including ju-jutsu), and first aid. For the non-Europeans, who prove apt pupils, the course is only two months; it comprises police duties, criminal procedure, foot drill, and physical training.

Electricians, who receive instruction, *inter alia*, on aerial lines, underground cables, office installations, general faulting, telegraph equipment, exchange maintenance, teleprinters, train token, and radio equipment, not only attend indoor classes and workshops, but do practical outdoor work as well. Short lengths of typical telegraph cable layout are available for instruction and experiment.



European police recruits learn how to give evidence in a law court

Most of the classes at Kroonstad, with the exception of the police, spend several hours each week in a large hangar devoted entirely to train work. Painted on the floor is a long circular track, comprising five stations, two with double line and three with single, with an operating section. The layout includes all the necessary signals, point and signal levers, train token apparatus, inter-station telegraph and telephone systems, life size. It is thus possible to run "trains" to a timetable and give all students a thoroughly practical grasp of train working.

At Esselen Park, when this section is transferred from Kroonstad, the hangar will be at least half as large again, to permit sections between stations to be introduced, and the line will run, more realistically, from terminal to terminal. Most probably, narrow-gauge track and hand-pushed trolleys to simulate trains will be used. It is also planned to have a 3- to 4-mile actual 3 ft. 6 in. gauge outdoor track on which "live" locomotives can be operated by students. This may not prove as realistic in practice as it sounds, as trains will, obviously, have to operate at slow speeds, the instructor will find control more difficult, and, because of the larger distances, it will take longer to "mount" an exercise. Shorter periods in a larger hangar may prove more beneficial.

Ultimately, as there will be at Esselen Park a European administrative, catering, and instructional staff of 100, it is clear that they, with their wives and children, will compose a community of some 300 to 400, besides the 1,200 students and the native police trainees, servants and workmen. Living quarters will be provided for nearly 2,000 persons on a 1,200-acre site.

The College itself will include one instructional and administrative block, now under construction, which, apart from classrooms and offices, will have a central hall to seat 1,600, where the Principal and important visitors can address the whole college at one time. The hall can also be used as a cinema, and for concerts, lectures, and debates.

There will also be two residential blocks, one for 500 and the other for 700 students; the former is partially completed and the site is selected for the latter. There will be separate instructional blocks for Road Motor Transport Communications. Two gymnasia will be included. All these blocks will be interconnected by covered colonnades.

Close to the College a village for the instructors is in course of erection, and will eventually contain a recreation centre, with club house, tennis courts, bowling green, and other amenities. Further away will be a native village with married quarters for native servants and workers, and police students. There will be no compound in the ordinary sense of that word. On the edge of the large estate there is already a nursery where trees, shrubs, plants, and flowers are being reared in order to "landscape" the whole site.

For the indoor recreation of students there will be a games block, with four billiard tables, badminton court, table tennis, a bar, and a shop. A recreation and reference library are also in course of erection. Out-of-doors students will be able to enjoy the choice of 16 tennis courts, two Rugby football fields encircled by an oval running track, two soccer fields, a swimming bath, and a practice ground for baseball, soft ball, and hockey.

New Residential Block

As part of the new residential block not yet begun there will be a common-room wing for the instructors. It will contain a club and dining room, with a guest room for visitors, and a training centre for the catering staff attached.

In the residential block, already completed, there is a fine dining hall with excellently appointed kitchen, using oil-fired cookers. All long-course students are provided with a neat and compact cabin. Those undergoing shorter courses sleep in well-lit, airy dormitories. There is a well-furnished lounge to every 44 students, and communal washplaces, with showers and lavatories, are allotted one to twenty-two trainees. From the cleanliness, evident care and tidiness displayed, it is clear that these facilities are all much appreciated by the students.

Railway Museum

Though its final site has not yet been chosen, a railway museum is housed in temporary huts within the College grounds. A most remarkable collection of exhibits has been gathered from all parts of the Union by Mr. J. Bennett, the curator, to whom the task has been a lifelong hobby. When eventually brought together in a suitable setting, the museum will house full-scale locomotives and President Kruger's personal coach in which he conducted the government of the South African Republic until his exile. Models of locomotives and rolling stock, samples of tickets, specimens of actual permanent way, books and photographs showing the development of the South African railways for almost a century are all here, awaiting final sorting and adequate display.

The oil-fired kitchens where catering trainees learn the practical side of cooking

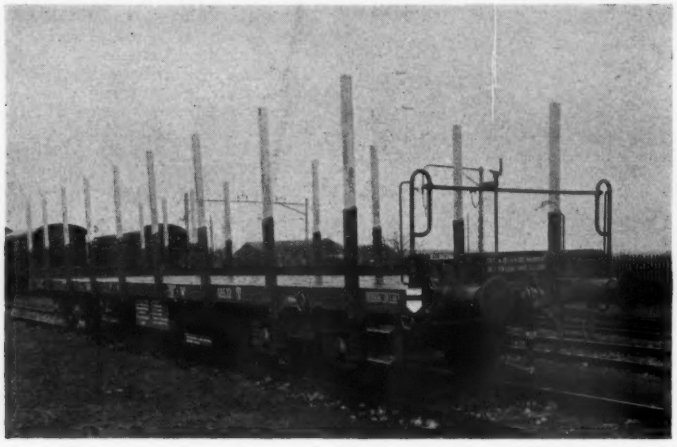
To round off the Esselen Park project there will be a hospital, schools for the children of both the European and native

members of the staff, and a parade ground and full-sized shooting range for the police students. The total capital cost will be large, but for a railway and harbour system employing 165,000 Europeans and non-Europeans, operating over 13,000 miles of track, vision must be wide and far-sighted.

When the College is concentrated in the completed buildings at Esselen Park, and as experience improves methods of instruction, the South African railways will benefit enormously. Even now, at this early stage, good results are evident. When all railway employees, from the General Manager downwards, are Esselen Park-trained men, there will be cohesion of spirit in a great undertaking such as few may rival. The responsibility, not only towards the railway administration and their students, on the part of the instructional staff, is great. In their hands, if they continue to insist on high standards in all departments of their work, may well rest the pace and efficiency of the development of their country. Transport is the life-blood of South Africa as of other lands, and better trained railway personnel can go far towards making the country more prosperous.

New Flat Wagons for Swiss Federal Railways

Hinged ends facilitate loading of road vehicles



IN 1946 and 1947, the Swiss Federal Railways placed in service an improved version of the M9-class high-capacity bogie flat wagons, which incorporates advantages over the older type, the first units of which date from 1917. The improved wagons are specially suitable for the conveyance of long irons and timber, but can also be adapted, by the addition of stanchions, to carry sawn boards, straw, hay. and similar goods. They are particularly suitable for carrying heavy types of road vehicles and military vehicles, including heavy tanks. Vehicles can be loaded and unloaded sideways or head-on; for the latter purpose the low end walls of the new wagons are hinged, folding outward, and thus forming a bridge over the buffers edging on the loading platform. Because of the particular classes of loads for which the wagons are intended, the floor has been kept as low as possible, that is, $8\frac{1}{16}$ in. lower than in the older type.

Carrying Capacity

The carrying capacity of the new wagons is 44 metric tons, but normally loads should not exceed 40 metric tons. In the older type of M9 flat wagons heavy loads had to be distributed evenly over the whole length of the floor. This is not required in the new wagon, where the two longitudinal girders under the middle portion of the carrying platform allow heavy loads to be concentrated in the centre of the wagon, if necessary.

The carrying platform of the wagon rests on two strong longitudinal girders, two side members and connecting pieces, the whole being supported by the pins of the two bogies. The load is transmitted to the two axles of each bogie through 8 helical springs. The wood flooring of the wagon is $2\frac{3}{8}$ in. thick, and there are 9 revolving anticoloidal stanchions on either side of the wagon; 4 large iron rings on either side have been provided for fastening tarpaulins or ropes. At either end is a folding wall $11\frac{13}{16}$ in. high and intended not only to act as a bridge for head-on loading and unloading, but also to prevent certain loads, as for instance, vehicles, from shifting longitudinally over the end edges. The old M9 wagons (No. 69,501 to 69,530) were provided with these end walls. The stanchions have been fitted with eyes for holding fastening ropes or chains. On one end of the wagon there is a transversal gangway with handrail and handbrake, and at each of the four corners is a strong eye for fastening towing hawsers.

The bogies are particularly plain, consisting of fabricated sheet components welded together to form the frame, which supports the brake rigging and the cast steel step-bearing for the pin. The helical springs function also as a guard plate. They allow also of a limited lateral oscillation of the frame and of the carrying platform. Each spring surrounds a strong spindle with rubber abutment intended as a safety device in case of breakage of the spring or derailment. The dia. of the wheels is 3 ft. 1 in., and the axle journals are $8\frac{11}{16}$ in. by 5 in. SKF axle bearings in cast steel monobloc axle boxes have been provided. The latter carry at their sides the step-bearings for the coil springs. Each axle-box contains two ball bearings of $9\frac{7}{16}$ in. dia. and 31 in. width.

To enable the bogie to rotate underneath the carrying platform and negotiate sharp curves or small turntables, a hydraulic lifting device has been provided, by means of which the carrying platform, as well as any load (up to the maximum load), can be raised by about $9\frac{1}{16}$ in. Originally the lifting device was not supplied with the wagons because of shortage of the necessary equipment, but the wagons are being gradually fitted with it, and it is hoped to complete the work before the end of this year. The raised platform will also enable certain loads to be handled without the aid of cranes. The hydraulic pumps of the lifting appliance have been located underneath the central portion of each bogie frame.

Draw gear of the ordinary type has been provided, but its two portions at either end of the wagons have not been linked by a connecting rod. Coupling screws of 70 *tonnes* resistance are fitted.

The wagons are fitted with compressed air brakes of the Drolshammer type, adaptable to goods train or passenger train working, and all the wheels are braked on both sides by brake blocks of ordinary construction, each block consisting of two parts.

For sideways loading and unloading of vehicles each wagon has two mobile ramps. In addition, there are three mobile ramps for head-on loading and unloading from the ground.

The main particulars of the improved M9 flat wagons are given below, and those of the older type have been added for comparison.

—	Improved M9 class	Older M9 class
Length over buffers ...	55 ft. $6\frac{1}{2}$ in.	55 ft. $6\frac{1}{2}$ in.
Length of loading platform (outside)* ...	51 ft. $5\frac{3}{4}$ in.	51 ft. $5\frac{3}{4}$ in.
Width of loading platform	9 ft. $0\frac{7}{16}$ in.	9 ft. $0\frac{7}{16}$ in.
Area of platform... ...	462·8 sq. ft.	462·8 sq. ft.
Total wheelbase ...	41 ft. $7\frac{11}{16}$ in.	40 ft. $11\frac{13}{16}$ in.
Wheelbase of bogie ...	5 ft. $10\frac{5}{16}$ in.	6 ft. $7\frac{1}{8}$ in.
Distance between centres of bogies	35 ft. $8\frac{3}{8}$ in.	34 ft. $5\frac{1}{8}$ in.
Height between top of rail and centre of buffer	3 ft. $5\frac{13}{16}$ in.	3 ft. $5\frac{13}{16}$ in.
Height between top of rail and platform surface	3 ft. $9\frac{1}{8}$ in.	4 ft. $4\frac{1}{2}$ in.
Height between top of rail and top of stanchion	10 ft. 2 in.	10 ft. 2 in.
Capacity (maximum) ...	Metric tons 44	Metric tons 36·75
Capacity (normal) ...	40	35
Tare weight	20	20

* Inside (new wagons, between end walls) 50 ft. $11\frac{13}{16}$ in.

The wagons have been built by Schweizerische Wagons-und Aufzügefabrik, of Schieren-Zurich.

REICHSBAHN LAKE SERVICE RENEWED.—The first Reichsbahn vessel on Lake Constance to be placed in commission since the war, the *Augsburg*, went into service at the end of August. This vessel, built in 1931, and formerly the fastest vessel on the lake, was wrecked during the war, immobilised in Lindau port, and out of commission for nine years. The wartime vicissitudes of the vessels were described in our June 1 and June 15, 1945, issues.

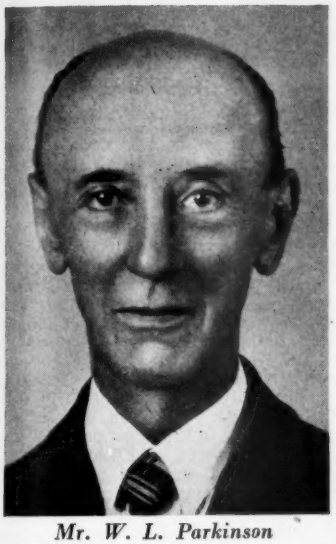
RAILWAY NEWS SECTION

PERSONAL

L.M.R. OPERATING SUPERINTENDENT

The title of Mr. J. W. Watkins, D.S.O., M.C. (who succeeds Mr. S. H. Fisher, C.V.O., Chief Operating Manager), is Operating Superintendent (not Chief Operating Superintendent, as was incorrectly stated in last week's issue).

Mr. James Briggs, M.I.C.E., who, as recorded in our September 3 issue, has been appointed Civil Engineer, London Midland Region, British Railways, is the eldest son of the late Mr. J. Briggs, C.B.E., sometime Engineer-in-Chief of the Midland Railway, and himself joined the Chief Engineer's Department of the same railway in 1908. In 1912 he was appointed an Assistant to the Western Divisional Engineer. In October, 1914, Mr. Briggs was commissioned in the Royal Engineers, and in the next year went to France, where he remained until March, 1919, engaged on military railway constructional works. He was promoted Captain in 1916 and Major in 1918, and was mentioned in despatches. He returned to the Midland Railway in 1919, in the New Works Section, Chief Engineer's Department, and in 1920 was appointed Southern Divisional Engineer. He continued in a corresponding position under the L.M.S.R. until 1928, when he was transferred to Bangor as District Engineer, North Wales. In 1935 he became Senior Assistant (Permanent Way) to the Chief Engineer, L.M.S.R., and in 1937 was appointed Assistant Engineer (Permanent Way). He was made Assistant Engineer in 1945, and Assistant Chief Engineer in 1947. He is a Major in the Engineer & Railway Staff Corps, R.E. (T.A.).



Mr. W. L. Parkinson

Appointed Assistant (Staff & Organisation) to Civil Engineer, L.M. Region, British Railways

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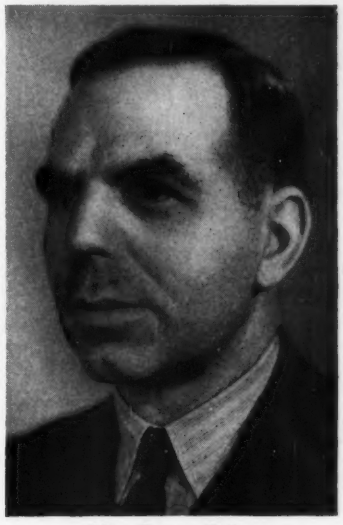
Colonel Kenneth Cantlie has been appointed Overseas Representative of the Locomotive Manufacturers' Association.

Mr. W. L. Parkinson, who was recently appointed Assistant (Staff & Organisation) to the Civil Engineer, London Midland Region, British Railways, was born at Bristol. He entered the service of the Midland Railway in the Chief Goods Manager's Department at Derby in 1904, and was transferred in 1907 to the Staff & Accounts Section of the Chief Engineer's Office, becoming Head of the Salaried Section of that department in 1920. Mr. Parkinson was transferred to the Chief Engineer's Office at Euston, L.M.S.R., in September, 1928, and was appointed Chief Staff Clerk in March, 1929. In August, 1935, on the reorganisation of the Chief Civil Engineer's Department, L.M.S.R., with the concentration of the headquarters staff at St. Pancras, he was appointed Chief Staff Clerk of the department, which position he held until his present appointment.



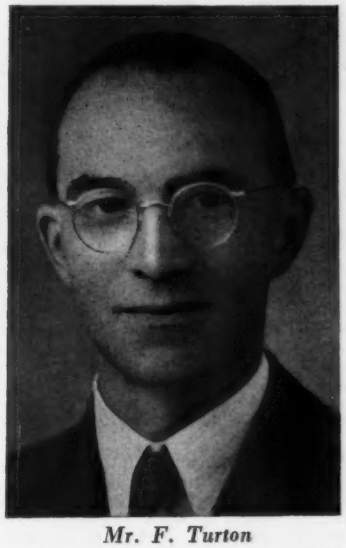
Mr. James Briggs

Appointed Civil Engineer, L.M. Region, British Railways

Among recent promotions to the rank of Colonel, gazetted under the heading of Regular Army, are those of War Substantive Lt.-Colonel (temporary Brigadier) A. T. de Rhé-Philipe, from R.E.; War Substantive Lt.-Colonel (temporary Brigadier) I. L. H. Mackillop, from R.E.; and War Substantive Lt.-Colonel (temporary Colonel) C. E. M. Herbert, from R.E.

We regret to record the death, at the age of 67, of Mr. Herbert George Dring, who retired in 1944 from the position of European Passenger Manager, Canadian Pacific Railway. Mr. Dring entered the company's service in 1897. In 1905 he was made Chief Clerk to the General Passenger Agent, and in 1908 he was appointed Assistant General Passenger Agent, in London. He became General Passenger Agent in 1916, and in 1919 took up the position of European Passenger Manager.

Mr. F. Turton, M.I.Struct.E., who was recently appointed Bridge & Steelwork Assistant to the Civil Engineer, London Midland Region, British Railways, was born at Wath-on-Dearne, Yorkshire, and served his apprenticeship with the Carlton Main Colliery Co. Ltd., Barnsley. After spending two years as a partner in a firm of reinforced concrete and public works contractors, he gained a varied experience as a draughtsman with the Midland & Great Northern Joint Railway at Melton Constable, and as a civil engineering assistant on the construction of the Billingham factory of I.C.I. In 1929 he joined the L.M.S.R. as a draughtsman in the Bridge Office of the Western Divisional Engineer, Crewe. On the reorganisation of the Chief Engineer's Department in 1935 Mr. Turton was transferred to St. Pancras as a draughtsman in Steelwork Section No. 1, and in 1945 was appointed Assistant in charge of Steelwork Section No. 1, which position he held until his present appointment. During the recent war he served with the L.M.S.R. Headquarters Company of the 8th Battalion, Hertfordshire Home Guard.



Mr. F. Turton

Appointed Bridge & Steelwork Assistant to Civil Engineer, L.M. Region, British Railways

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Mr. Herbert Ashton, M.I.Mech.E., M.I.Loco.E., who has been appointed Locomotive Superintendent of the Central Railway of Peru, is 45 years of age. He received mechanical engineering training with the Lancashire & Yorkshire Railway and later the L.M.S.R. in the locomotive and marine departments from 1919 to 1924, and subsequently gained further experience with that company until 1929, when he was appointed District Locomotive Engineer on the Great Western of Brazil Railway. In 1934 he joined the Southern Railway of Peru as Assistant Locomotive Superintendent, in which post he remained until transferred to his present position with the Central Railway. Mr. Ashton is a Member of the Institute of Welding.

Mr. John Freeguard, who, as recorded in our July 30 issue, has been appointed Divisional Manager (Freight), Western Division, Road Transport Executive, is 39 years of age. He was educated at West Buckland School, North Devon. In partnership with his brother, Mr. W. G. Freeguard, he founded Freeguard Brothers Transport Company in 1931, and in 1937 amalgamated with William Bater & Sons and Somerton Transport Company to form the present All British Carriers Limited, of which company he is Manag-

Mr. Herbert Ashton

Appointed Locomotive Superintendent, Central Railway of Peru

Mr. John Freeguard

Appointed Western Divisional Manager (Freight), Road Transport Executive

Mr. A. J. Wright

Appointed South Western Divisional Manager (Freight), Road Transport Executive

ing Director. All British Carriers later acquired G. C. Wadsworth Limited, of Cardiff, Contractors (Cardiff) Limited, and Monmouthshire Transport Limited, of Newport. Mr. Freeguard is Chairman & Managing Director of British Conveyances Limited, Joint Managing Director of Freeguard Brothers (Insurance) Limited, and a Director of Cardiff Aeroplane Club Limited. He is Chairman of South Wales Area Road Haulage Wages Board, and a member of the Road Haulage Central Wages Board and of the Joint Industrial Council of the Road Transport Industry.

Mr. A. J. Wright, M.B.E., M.Inst.T., who, as recorded in our August 13 issue, has been appointed Divisional Manager (Freight), South Western Division, Road Transport Executive, was born in 1900. He commenced his career as a pupil trainee in motor engineering, and later entered the Royal Naval Air Service in a technical branch. He subsequently obtained experience with Scammell Lorries Limited, and he joined Southern Roadways as Chief Engineer on its formation in 1923. On the formation of Southern Roadways (1936) Limited he was appointed Managing Director, also Managing Director of Poole Wharves Limited, Coastal Roadways Limited and Southern Commercial Motors (Poole) Limited. During the recent war he was appointed Sub-District Manager under the Ministry of War Transport Emergency Scheme, and a member of the Emergency Services Organisation of the Ministry of Aircraft Production. Mr. Wright's present appointments include membership of the Central Wages Board and Joint Chairmanship of the South Eastern Road Haulage Wages Board; also membership of the South Eastern Road & Rail Conference, and of other bodies. He was Chairman for 1946-47 for the Southern Area of the Road Haulage Association, and is Chairman of the Southern Section of the Institute of Transport for 1947-48. He was made an M.B.E. in the King's Birthday Honours, 1945.

Mr. J. Leather, who, as recorded in our August 20 issue, has been appointed Assistant Advertising & Publicity Officer, London Midland Region, British Railways, was educated at Watford Grammar School and entered the service of the L.M.S.R. in 1929 in the Chief Stores Superintendent's Department. In 1930 he was appointed to the staff of the Executive Research Office, Euston, and in 1932 was transferred to the Stationery Stores, Crewe. Returning to Euston, he was engaged in the design and production of Advertising printing, and in 1935 was made responsible for purchase in connection with all L.M.S.R. Advertising publications. In the recent war Mr. Leather was commissioned in the Royal Air Force, and after service overseas was seconded to the Directorate of Public

Mr. J. Leather

Appointed Assistant Advertising & Publicity Officer, L.M. Region, British Railways

Mr. L. G. Hind

Appointed Assistant Chief of Police, Scottish Region, British Railways

Mr. I. G. MacGregor

Appointed District Superintendent, Lincoln, Eastern Region, British Railways

Relations, Air Ministry, for public relations duties with the Ministry of Information. He returned to the Executive Research Office on demobilisation in 1946.

Mr. Leslie G. Hind, M.B.E., Divisional Superintendent, Police Department, Leeds, London Midland Region, British Railways, who, as recorded in our August 6 issue, has been appointed Assistant Chief of Police, Scottish Region, Glasgow, joined the Midland Railway at Derby in 1920 as Assistant Chief of Police. After the amalgamation he served at Liverpool and Manchester and for 14½ years was Detective Inspector, L.M.S.R., Crewe, before taking up in 1942 the appointment which he now vacates to go to the Scottish Region. Mr. Hind served throughout the 1914-18 war. He was in charge of the police arrangements for the railways in France and Flanders, and for the latter part of the war was Assistant Provost Marshal. He was made an M.B.E. for his services.

Mr. I. G. MacGregor, Assistant District Superintendent, Kings Cross, Eastern Region, British Railways, who, as recorded in our August 27 issue, has been appointed District Superintendent, Lincoln, joined the L.N.E.R as a traffic apprentice in 1931, and, after a period of training and supernumerary appointments, was appointed yardmaster at Woodford & Hinton in 1936. In the next year he became Deputy Chief Controller, Central Control, Western Section, Southern Area, L.N.E.R., and in 1939 was seconded to the Admiralty in the Railway Transport Section. From 1941-45 he served with the Royal Engineers, first as D.A.D.Tn, and latterly as A.D.Tn, in Movement Control, War Office. In 1945, on his return to the railway, Mr. MacGregor took up the appointment of Assistant District Superintendent, Norwich, and in 1946 was appointed Assistant District Superintendent, Kings Cross.

Mr. B. C. Mallik has been appointed to officiate as Transportation Manager, Bengal Nagpur Railway. Since 1946, when the Indian Railway Board decided to establish a public relations and publicity organisation on a zonal basis in Calcutta, Bombay and Madras, Mr. Mallik has been Public Relations Officer for the Calcutta group of railways.

ROAD TRANSPORT EXECUTIVE

The Road Transport Executive of the British Transport Commission announces the following appointments:—

Mr. S. E. Raymond to be Chief Staff & Welfare Officer, Headquarters.

Mr. A. H. Passey, on loan from London Transport Executive, is confirmed in his appointment as an engineer on headquarters staff.

Mr. N. C. McPherson to be Divisional Manager (Freight), North Eastern Division, from October 1.

PRESENTATIONS TO MR. W. K. WALLACE

Mr. W. K. Wallace, retiring Chief Civil Engineer, London Midland Region, British Railways, has been presented by fellow Chief Officers with a pair of solid silver George I reproduction sauce boats. The presentation was made by the Chief Regional Officer, Mr. G. L. Darbyshire, at a farewell luncheon. A gold watch, subscribed by Assistant Engineers at headquarters and District Engineers of the L.M.R., has also been given to Mr. Wallace. This was presented by Mr. Wallace's successor, Mr. J. Briggs.

NORTHERN IRELAND TRANSPORT AUTHORITY

The Minister of Commerce for Northern Ireland has appointed the following to be members of the Northern Ireland Transport Authority, established under the Transport Act (Northern Ireland), 1948 (see also editorial article in this issue): Major F. A. Pope (Chairman) (sometime a Vice-President of the L.M.S.R., and Chairman of the Northern Ireland Road Transport Board since the beginning of this year); Mr. W. A. Edmenson (a leading figure in shipping circles, and Chairman of the Northern Ireland Civil Aviation Advisory Committee); Mr. R. P. C. Gotto (a Belfast Harbour Commissioner); Sir Dudley E. B. McCorkell (a member of the Northern Counties Committee, and formerly Mayor of Londonderry); Mr. S. J. McCoubrey (Chairman of the Northern Ireland District of the Confederation of Shipbuilding & Engineering Unions, and a member of the panel for the National Arbitration Tribunal); Lt.-Colonel Viscount Massereene & Ferrard (Chairman of the Northern Counties Committee); Major W. G. Nixon (a prominent agriculturist); Mr. J. S. Rogers and Mr. D. Wilson Smyth (members of the Northern Ireland Road Transport Board); and Mr. A. E. Swain (a former President of the Ulster Farmers' Union).

Mr. J. S. Pettigrew, Chief Engineer, Sudan Railways, has been appointed Deputy General Manager. Mr. Pettigrew, a portrait and biography of whom appeared in our issue of April 16 last, is succeeded as Chief Engineer by Mr. C. T. Serjeant. Mr. B. B. Smith, Assistant Controller of Stores, Sudan Railways, has been appointed Controller of Stores, on the forthcoming retirement from that position of Mr. A. D. McKillop.

We regret to record the death on September 4, at the age of 59, of Mr. W. M. Teasdale, who was Assistant General Manager (Parliamentary) & Industrial Agent, L.N.E.R., from 1928 until 1932, since which year he had been a Director of Allied Newspapers Limited, now Kemsley Newspapers Limited, with special charge of the advertising interests of the last-named company. After occupying various posts in the Traffic Department of the former North Eastern Railway, Mr. Teasdale became the railway's Advertising Manager in 1920. From 1923, under the L.N.E.R., he became responsible for the company's advertising activities, which continued under his control until he became Assistant General Manager (Parliamentary) & Industrial Agent on January 1, 1928.

A dinner in honour of Mr. F. S. Chilvers, who has retired from the position of Assistant District Superintendent, Stratford, Eastern Region, British Railways, was held recently at the Talbot Restaurant, London Wall. The function was arranged by the staff of the District Superintendent's Office and the stationmasters and agents in the Stratford District, of whom 120 were present. Mr. Fiennes, Assistant Operating Superintendent, Eastern Section, presided, and was supported by Mr. Sanders, Stationmaster, Ilford. The presentation of a pair of binoculars from the District Superintendent's Office staff was made by Mr. Edwards, Chief Clerk. Mr. Booth, Stationmaster, Liverpool Street, handed a wristlet watch to Mr. Chilvers, a token of esteem from the stationmasters and agents in the Stratford District. Mr. F. C. Wilson, retired District Superintendent, Stratford, was also present.

Mr. Alfred Barnes, Minister of Transport, has been making a four-day tour of French port, road, and railway works, during which he has also been studying Paris traffic arrangements. He has been accompanied by Mr. C. A. Birtchnell, a Deputy Secretary of the Ministry of Transport.

Mr. C. R. Murray, hitherto General Freight Agent, Montreal, Canadian National Railways, has been appointed Assistant Freight Traffic Manager for the system, at headquarters, in charge of rates, tariffs and other matters.

We regret to record the death on August 20, at the age of 58, of Mr. Dudley William Sanford, formerly L.M.S.R., who, from 1946 until he was compelled by ill-health to relinquish the position at the end of last year, was Superintending Engineer of the Locomotive Testing Station, Rugby (L.M.S.R. & L.N.E.R.). During this year he had continued to carry on technical investigation in the Chief Mechanical Engineer's Department at Derby, London Midland Region.

Arthur Edward Towle, C.B.E.

AN APPRECIATION

The death of Arthur Towle is an event which calls for more than passing comment. May one who was first acquainted with him towards the evening of his great career, and who was to be enlightened by his precepts, pay a small tribute to his memory?

He was born and bred and virtually died in the service of the hotel industry. Following the example of his father, a friend and contemporary of Cesar Ritz, Arthur Towle carried the best hotel-keeping traditions of the Continent and London to the provinces and into Scotland, and he has bequeathed a legacy which it will be the opportunity of generations who succeed him to direct towards achieving recognition in this country of the dignity, artistry and importance of his trade. It was an uphill task, but he never wavered in the face of obstruction, misunderstanding and even derogation in his pursuit of this ideal.

So far and fast did his intellect range ahead in every sphere of the world in which he lived that it was no easy task to follow his teaching, and only the few who were privileged to be admitted to his inner counsels and who had ears to hear were so fortunate as to glean the harvest which was to be reaped from his sowing. Although a gentle character, he was a realist where his business was concerned, and this, coupled with a complex and dominating personality, made him an easy target for critics, who were prone to see in his mastery of his subject an arrogance which obscured for them the subtlety and breadth of his mind. His detractors were known to refer to him as "the arrogant publican" which, so far from causing him embarrassment, he interpreted as a tribute to the profession of public service which he so notably adorned.

It is impossible to compress into a few sentences an appreciation of the man and it is a tragedy that by his last long illness and untimely end we are deprived of the memoirs which one knows it was his wish to record. His passing leaves the hotel industry poorer for the loss of his knowledge and counsel, but at least he lived to see the awakening of a national interest in the calling to which he had devoted his life.

"H"

British Transport Commission Statistics

Summary of the principal statistics for the four-week period ended June 13

An editorial on a previous page of this issue explains that No. 6 of the statistical bulletins issued by the British Transport Commission* has been enlarged and remodelled. In addition to the figures for the four-week period ended June 13, totals for the year to that date are given in a separate section and another set of tables is included to show the trend of results since January 1, in comparison with 1947 performance. This article does not deal with these aggregate statistics, but is restricted to a review of the four-weekly figures, summarised in our usual form.

The statement of traffic receipts records for the first time a decrease in the passenger revenue of British Railways. This reflects a decline in the number of originating passenger journeys, which started in April and became more pronounced in May with a fall of over 8 per cent. in both first and third class travel.

The position on the freight side was no more reassuring. An increase of only 6 per cent. in merchandise receipts, despite higher rates, was due to a decrease of 7·7 per cent. in originating tonnage. Mineral and coal receipts showed substantial advances, but the improvement in these heavy traffics was not so marked as in earlier periods, though mineral traffic in the Western Region was up 15·5 per cent., and the coal tonnage declared in the North Eastern Region was over 10 per cent. higher. Net ton miles were estimated to be 3·08 per cent fewer than in 1947. Coal passed over shorter distances, on an average, than it did in June, 1947.

Considerably more coaching train miles were run, but there was a slight reduction in freight train miles. A freight train speed of 8·69 m.p.h. was the highest for the year, but it is a pity that the other regions cannot attain the freedom of movement reached by the North Eastern, whose figure is 10·63. The locomotive coal consumption of 61·53 lb. per engine mile was heavy for a summer period. The rolling stock position was not altogether satisfactory, as the serviceable stock of wagons on June 13 was 12,671 below the 1947 comparative number. No fewer than 137,366 wagons, or 11 per cent. of the total operating stock, were under or awaiting repair.

Inland waterways had a lean period with a decrease in tonnage and ton-miles. London Transport handled a volume of travel which was 5 per cent. above 1947, but 2 per cent. below the heavy carryings in May last.

The staff of British Railways has now reached the imposing total of 700,963; the number of additional appointments made in the June period was 2,555, bringing the gross addition to the establishment this year up to 22,008.

* British Transport Commission Transport Statistics, 1948. Series No. 6. Period to June 30. London: British Transport Commission. Price 1s.

1. BRITISH TRANSPORT COMMISSION TRAFFIC RECEIPTS

	Four weeks to June 13		Inc. or dec.	Aggregate to June 13		Inc. or dec.
	1948	1947		1948	1947	
	£000	£000	£000	£000	£000	£000
British Railways (receipts from railway working)—						
Passengers	9,766	9,826	− 60	51,559	46,731	+ 4,828
Parcels, etc., by passenger train	2,311	2,007	+ 304	13,065	11,416	+ 1,649
Merchandise	6,086	5,699	+ 387	40,011	31,734	+ 8,277
Minerals	2,156	1,714	+ 442	13,286	8,985	+ 4,301
Coal & coke	4,924	4,201	+ 723	30,805	24,779	+ 6,026
Livestock	54	67	− 13	403	397	+ 6
	25,297	23,514	+ 1,783	149,129	124,042	+ 25,087
London Transport—						
Railways	1,094	1,013	+ 81	6,692	5,973	+ 719
Buses & coaches	2,504	2,374	+ 130	14,389	12,626	+ 1,763
Trolleybuses & trams	881	854	+ 27	5,173	4,637	+ 536
	4,479	4,241	+ 238	26,254	23,236	+ 3,018
Inland Waterways—						
Tolls	55	54	+ 1	327	248	+ 79
Freight charges, etc.	68	72	− 4	438	381	+ 57
	123	126	− 3	765	629	+ 136
Total	29,899	27,881	+ 2,018	176,148	147,907	+ 28,241

2. BRITISH RAILWAYS

(A) Passenger Journeys Originating

	Region						Total
	London Midland	Western	Southern	Eastern	North Eastern	Scottish	
	+ or − over 1947 per cent.	+ or − over 1947 per cent.	+ or − over 1947 per cent.	+ or − over 1947 per cent.	+ or − over 1947 per cent.	+ or − over 1947 per cent.	+ or − over 1947 per cent.
Full fares	1,704,000 (−11·35)	1,045,000 (−14·62)	2,213,000 (−6·18)	964,000 (+8·97)	213,000 (−23·62)	399,000 (−10·10)	6,538,000 (−8·07)
Monthly return	8,316,000 (−13·56)	2,991,000 (−10·52)	9,503,000 (+0·34)	2,700,000 (−7·95)	1,038,000 (−20·84)	1,327,000 (−22·18)	25,875,000 (−8·84)
Excursion, weekend, cheap-day, etc.	1,994,000 (+133·53)	777,000 (+54·46)	862,000 (+3·54)	411,000 (+80·85)	437,000 (+64·99)	231,000 (+49·15)	4,712,000 (+66·14)
Workmen	7,200,000 (−4·76)	1,825,000 (−10·95)	6,168,000 (+1·00)	1,839,000 (−10·19)	929,000 (−13·82)	1,005,000 (−8·55)	18,966,000 (−4·89)
Other descriptions	1,622,000 (−15·54)	1,084,000 (−16·20)	1,737,000 (−16·54)	794,000 (−8·33)	431,000 (−25·31)	547,000 (−8·55)	6,215,000 (−15·29)
Season tickets (all descriptions)	5,514,000 (−9·85)	2,372,000 (−9·50)	8,681,000 (−21·84)	1,867,000 (−15·87)	610,000 (−15·60)	1,710,000 (−11·29)	20,754,000 (−16·02)
Total	26,350,000 (−5·87)	10,094,000 (−8·52)	29,164,000 (−8·74)	8,575,000 (−6·57)	3,658,000 (−13·58)	5,219,000 (−11·97)	83,060,000 (−8·04)

(B) Freight Tonnage Originating

	Region						Total
	London Midland	Western	Southern	Eastern	North Eastern	Scottish	
	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.	Tons + or − over 1947 per cent.
Merchandise	1,201,000 (−7·80)	766,000 (−1·70)	276,000 (−3·22)	459,000 (−10·15)	514,000 (−10·11)	586,000 (−12·59)	3,802,000 (−7·72)
Minerals	1,542,000 (+1·64)	651,000 (+15·50)	110,000 (−1·48)	685,000 (+1·87)	778,000 (+2·86)	636,000 (+5·11)	4,402,000 (+4·16)
Coal & Coke	4,190,000 (+5·45)	1,797,000 (+5·94)	245,000 (−0·82)	1,895,000 (+7·31)	2,336,000 (+10·18)	1,683,000 (+5·92)	12,146,000 (+6·62)
Livestock	8,000 (−25·00)	8,000 (−24·66)	2,000 (−13·48)	5,000 (−57·01)	3,000 (−41·67)	21,000 (−16·70)	47,000 (−28·18)
Total	6,941,000 (+2·02)	3,222,000 (+5·65)	633,000 (−2·04)	3,044,000 (+2·82)	3,631,000 (+5·13)	2,926,000 (+1·26)	20,397,000 (+3·00)

(C) Net Ton Miles

—	Region						Total
	London Midland	Western	Southern	Eastern	North Eastern	Scottish	
	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.
Merchandise & livestock ...	167,118,000 (−11·22)	103,866,000 (−2·53)	23,882,000 (−5·22)	67,751,000 (−7·94)	46,194,000 (−7·93)	82,057,000 (−6·94)	490,868,000 (−7·72)
Minerals	125,519,000 (+1·35)	66,650,000 (+15·72)	13,590,000 (−8·01)	84,595,000 (−4·78)	31,125,000 (+8·07)	40,256,000 (+0·53)	361,735,000 (+2·21)
Coal & coke	272,672,000 (−2·36)	117,187,000 (−10·82)	26,069,000 (−11·62)	164,505,000 (−1·64)	67,233,000 (+11·91)	69,094,000 (+4·70)	716,760,000 (−2·28)
Total, all classes of traffic ...	565,309,000 (−4·41)	287,703,000 (−2·66)	53,541,000 (−8·53)	316,851,000 (−3·89)	144,552,000 (+3·95)	191,407,000 (−1·44)	1,569,363,000, (−3·08)

(D) Train Miles

—	Region						Total
	London Midland	Western	Southern	Eastern	North Eastern	Scottish	
	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.	+ or − over 1947 Per cent.
Coaching train miles—							
Loaded	4,557,000 (+1·97)	2,760,000 (+3·44)	4,121,000 (+1·73)	2,473,000 (+5·41)	1,087,000 (+0·74)	1,805,000 (+2·69)	16,803,000 (+2·65)
Empty	154,000 (+0·65)	133,000 (+1·94)	119,000 (−1·65)	96,000 (+18·52)	52,000 (+15·56)	66,000 (+6·63)	620,000 (+4·55)
Total loaded & empty ...	4,711,000 (+1·95)	2,893,000 (+3·37)	4,240,000 (+1·63)	2,569,000 (+5·85)	1,139,000 (+1·33)	1,871,000 (+2·83)	17,423,000 (+2·71)
Freight train miles—							
Loaded	2,856,000 (−1·53)	1,566,000 (+1·65)	513,000 (−4·14)	1,566,000 (+0·16)	870,000 (−0·39)	1,424,000 (−0·99)	8,795,000 (−0·64)
Empty	508,000 (+1·04)	200,000 (+11·51)	11,000 (−8·19)	314,000 (−8·49)	199,000 (+10·20)	217,000 (+9·76)	1,449,000 (+2·36)
Total loaded & empty ...	3,364,000 (−1·15)	1,766,000 (+2·68)	524,000 (−4·23)	1,880,000 (−1·40)	1,069,000 (+1·42)	1,641,000 (+0·31)	10,244,000 (−0·22)
Total coaching & freight train miles—							
Loaded	7,413,000 (+0·60)	4,326,000 (+2·78)	4,634,000 (+1·05)	4,039,000 (+3·29)	1,957,000 (+0·25)	3,229,000 (+1·06)	25,598,000 (+1·50)
Empty	662,000 (+0·91)	333,000 (+7·42)	130,000 (−2·25)	410,000 (−3·30)	251,000 (+11·07)	283,000 (+8·85)	2,069,000 (+2·99)
Total loaded & empty ...	8,075,000 (+0·62)	4,659,000 (+3·10)	4,764,000 (+0·95)	4,449,000 (+2·68)	2,208,000 (+1·36)	3,215,000 (+1·64)	27,667,000 (+1·61)

(E) Freight Train Miles per Train Hour

Region												Total	
London Midland		Western		Southern		Eastern		North Eastern		Scottish			
1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947
7·51	6·81	9·54	8·56	8·95	8·77	8·37	7·79	10·63	9·91	10·18	9·89	8·69	8·03

(F) Locomotive Coal Consumption

—	Region												Total	
	London Midland		Western		Southern		Eastern		North Eastern		Scottish			
	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.	Tons	+ or − over 1947 Per cent.
Tonnage consumed ...	334,000	(−1·36)	162,000	(+8·37)	71,000	(+0·55)	193,000	(+1·94)	85,000	(−3·05)	166,000	(−1·59)	1,011,000	(+0·66)
Lb. per engine mile ...	64·08	(−0·87)	51·87	(+5·36)	52·88	(+3·93)	65·41	(−0·61)	60·26	(−3·13)	69·35	(−2·09)	61·53	(+0·03)

(G) Rolling Stock Position

	Operating stock	Number under repair	Serviceable stock	Serviceable stock in 1947
Locomotives ...	20,086	3,738	16,348	15,837
Coaching vehicles	55,302	6,243	49,059	48,103
Freight wagons	1,195,601	137,366	1,058,235	1,070,906

3. INLAND WATERWAYS

Tonnage of traffic and ton-miles

	Tonnage	+ or − over 1947 per cent.	Ton-miles	+ or − over 1947 per cent.
General merchandise	290,000	(+1·37)	6,083,000	(−8·66)
Liquids in bulk ...	130,000	(−5·50)	3,005,000	(−1·23)
Coal, coke, patent fuel and peat ...	391,000	(−1·08)	5,847,000	(−1·06)
Total (all classes of traffic)	811,000	(−0·97)	14,935,000	(−4·33)

4. LONDON TRANSPORT

(A) Passenger Journeys Originating

	Number	+ or − over 1947 per cent.
Railways	48,812,000	(+6·11)
Buses & coaches	214,486,000	(+5·63)
Trams & trolleybuses	94,531,000	(+3·85)
Total	357,829,000	(+5·22)

(B) Rail and Road Car Miles

	Miles	+ or − over 1947 per cent.
Railways	17,419,000	(+9·76)
Buses & coaches	24,137,000	(+4·25)
Trams & trolleybuses	8,738,000	(+3·02)
Total	50,294,000	(+5·87)

(C) Rolling Stock Position.

	Operating stock	Number under repair	Serviceable stock	Serviceable stock in 1947
Railway vehicles ...	3,948	369	3,509	3,315
Buses & coaches ...	7,323	1,050	6,273	5,883
Trams & trolleybuses	2,625	270	2,355	2,314

5. STAFF

	Total staff employed	British Railways	London Transport	Inland Waterways
Salaried (Administrative, Technical & Clerical) ...	116,267	110,720	4,782*	644
Operating ...	407,548	345,023	60,922	1,603
Maintenance ...	247,400	214,590	30,931	1,879
Other	34,622	30,630	3,980	—
Total ...	805,837	700,963	100,615	4,126

* Administrative only

British Railways Winter Timetables

Increased restaurant, sleeping car and reserved seat facilities together with both accelerated and new main-line services

Among the principal improvements to be included in British Railways 1948-49 winter train services, which will come into effect on Monday, September 27, and of which details were announced at a press conference held at the Railway Executive Headquarters in London, last Tuesday, will be:—The extension of advance-seat booking arrangements to 139 additional week-day and 82 additional Sunday trains; 91 new main-line services; acceleration of some express services by from 20 to 78 min.; augmented suburban services in the London area; more trains with restaurant or sleeping-car facilities.

Though steady progress is being made in track repairs, enabling some speed restrictions to be removed with beneficial results to timekeeping, the shortage of coaches is the dominant factor in the provision of a better train service, and there are still nearly 5,000 fewer coaches available for traffic than in 1939. It was hoped to construct 4,500 new coaches this year, but under present conditions less than a third of this number can be built, and next year it is hoped to carry out a modest construction programme of 2,000 coaches.

The 91 new main-line services on week-days and Sundays will operate between such points as:—

London and Bradford
London and Hereford
London and Eastbourne
Newcastle and Birmingham
Leeds and Liverpool
Nottingham and Bradford
Birkenhead and Margate
York and Bournemouth
Cardiff and Brighton
Manchester and Glasgow
Glasgow and Aberdeen
Liverpool and Colchester
Worcester and London

These new services include many summer trains which are being retained, others which will run each week-day instead of at week-ends only, some services suspended during the fuel cuts, and some pre-war trains reinstated.

Wherever possible, trunk and local services are being accelerated to bring trains more nearly into line with pre-war timings, and the full pre-war train service is to be restored in the Southern Region suburban area during the off-peak period, except after 10 p.m. This off-peak service will be operated by shorter trains, so as to economise in fuel and maintenance. On the Liverpool Street—Chingford and Liverpool Street—Enfield Town lines, peak suburban services will be increased by approximately 50 per cent. and 35 per cent. respectively, and many of the trains accelerated.

The number of trains on which seats may be reserved is to be extended considerably and will include cross-country as well as main-line services. More night trains are being brought within the scope of this arrangement, which will now apply to 365 week-day and 120 Sunday trains, as compared with 226 and 38 respectively in the present summer service, and 111 and 16 last winter. During the summer service, reservations could not be made on Saturdays and Sundays on the Southern and Western Regions, but that restriction will be removed in the winter service. It is intended progressively to increase the number of reserved-seat trains within the limit of resources.

Restaurant car services on week-days are to be increased to 602, which compares with 557 in the summer service. Routes on which the additional services will operate include those between:—

Manchester and Bournemouth
Birmingham and Newcastle
York and Bournemouth
Colchester and Liverpool
Birkenhead and Margate
London and Newcastle
London and Ipswich
London and Norwich, Yarmouth and Lowestoft
London and Plymouth
London and Ramsgate

The following additional night services will have sleeping car facilities:—

First class sleepers
11.45 p.m. Kings Cross to Newcastle } Each week-day
10.35 p.m. Newcastle to Kings Cross } and Sundays
Third class sleepers
11.50 p.m. Paddington to Plymouth { Each week-day and Sundays

The sleeping cars on the 7.30 p.m. train from Euston to Perth (Saturdays excepted) are to be extended to Forfar and new and later sleeping car facilities to Perth given by the 10.50 p.m. train from Euston.

Eastern and North Eastern Regions

Two new-named trains are to be introduced on the Eastern and North Eastern Regions—a Pullman car train between Newcastle, Darlington and Kings Cross, known as the "Tees-Tyne Pullman," and an additional express, the "Norfolkman," between Norwich, Ipswich, and Liverpool Street. The "Tees-Tyne Pullman" will leave Newcastle at 9 a.m. (Saturdays excepted), Darlington at 9.51, and reach Kings Cross at 2.16 p.m. The return train will leave Kings Cross at 5.30 p.m. and arrive Darlington at 9.57 and Newcastle at 10.50 p.m. Seats will be reservable.

The "Norfolkman" will leave Liverpool Street at 10 a.m., Ipswich at 11.28, and reach Norwich at 12.20 p.m. The return train will depart from Norwich at 5 p.m., Ipswich at 5.54 p.m., and arrive Liverpool Street at 7.20 p.m. The new express will be provided with restaurant cars, and seats will be reservable. Connecting services will be available to and from Cromer, Sheringham, Yarmouth (Vauxhall), and Lowestoft (Central).

The "Flying Scotsman" will cease running non-stop between Kings Cross and Edinburgh and will call in each direction at Grantham and Newcastle.

A pre-war service will be partially restored by the introduction of a new through train between Liverpool, York, and Colchester, leaving Liverpool (Central) at 2 p.m., Manchester (Central) at 2.55 p.m., and reaching Colchester at 10.25 p.m. In the reverse direction the train will leave Colchester at 7.20 a.m. and arrive at Manchester (Central) at 2.14 p.m. and Liverpool (Central) at 3.20 p.m. It is hoped at a later date to arrange for this cross-country service to operate to and from Harwich (Parkeston Quay).

London Midland Region

Nearly 40,000 more miles a week as compared with last winter will be run by trains of the London Midland Region, and seat reservation facilities will be extended to 42 more long-distance trains, bringing up to 78 the number of L.M.R. trains on which seats are reservable in advance.

Restaurant cars will be provided on 19 more trains, making 118 altogether, and 12 new expresses will be run. An increased service of fast trains between Fenchurch Street and Southend will be introduced, covering the journey within the hour.

Twelve new express trains will be introduced as follows:—

2.00 p.m. St. Pancras to Bradford, calling at Nottingham and principal stations *en route*
9.03 a.m. Sheffield to St. Pancras, calling at Nottingham and principal stations *en route*
12.40 p.m. Manchester London Road to Birmingham New Street, calling at Stoke and principal stations *en route*
3.50 p.m. Birmingham New Street to Manchester London Road, calling at Crewe and principal stations *en route*
3.55 p.m. (Saturdays excepted) Manchester Victoria to Blackpool Central
11.25 a.m. Leeds City to Liverpool Lime Street and 2.15 p.m. in the reverse direction
10.10 a.m. Blackpool (C) to Manchester Victoria (Previously ran Saturdays only)
8.40 a.m. Nottingham to Bradford, calling at principal stations *en route*
8.05 a.m. Birmingham New Street for Newcastle-on-Tyne, and 4.05 p.m. in the reverse direction calling at principal stations *en route*
6.10 a.m. Derby to Bristol (Previously ran Saturdays only)

In addition, the 10.50 p.m. (Saturdays excepted, also runs Sundays) Euston to Carlisle train will be extended to Perth, conveying first and third class sleeping cars. New through carriages for Southport will leave Euston by the 2.30 p.m. train, and in the reverse direction by the 2.50 p.m. train from Southport.

Western Region

On the Western Region, advance-seat-booking will be extended to 18 more main-line trains, making a total of 46, of which 21 will be from Paddington. There will be 24 new main-line services, among which will be the following on week-days:—

11.45 a.m. Paddington to Hereford
3.30 p.m. Paddington to Penzance (with slip portion for Weymouth and through coaches for the Torquay line)
9.10 p.m. Paddington to Weymouth Quay on Tuesdays, Thursdays and Saturdays (to give a later connection with the Channel Islands steamer than last winter)
7.45 a.m. Worcester to Paddington
9.45 a.m. Birmingham to Cardiff

A number of express services are to be accelerated and will include the following:—

6.45 p.m. (at present 6.5 p.m.) Paddington to Great Malvern—accelerated 33 minutes
4.33 p.m. (at present 4.20 p.m.) Birkenhead to Paddington—accelerated 33 minutes
12 noon Bristol to Paddington—accelerated 20 minutes.
5.30 p.m. (at present 4.30 p.m.) Paddington to Plymouth—accelerated 15 minutes

Seventeen additional restaurant car services and one more buffet car service are to be introduced, and third class sleeping car accommodation will be restored on the 11.50 p.m. Paddington to Plymouth train.

Southern Region

Forty-eight additional main-line trains will be run on the Southern Region, and will include the re-introduction of certain pre-war services and many of those suspended during the 1947 fuel crisis. There will be more trains between coastal towns and services between provincial towns and on the cross-country routes have been improved. The through train from Kent and Sussex to the Midlands and North Country towns *via* Reading has been restored to run each week-day, and the Brighton and Portsmouth service to Cardiff *via* Salisbury will run every week-day instead of at week-ends only. The Bournemouth to Birkenhead *via* Basingstoke and Reading and the Bournemouth to York service will run every week-day instead of at week-ends only.

In the London Suburban area, the electric services during off-peak hours (except after 10 p.m.) have been restored to full pre-war frequency. Most suburban routes are affected, and the services will be augmented by one or two additional trains each hour.

More restaurant and buffet cars are being

provided on the main-line services between London and the coast. On the through train from Kent and Sussex to the Midlands and North Country, and on the Bournemouth to Birkenhead and York service, restaurant car facilities will be provided.

From September 27 it will again be possible to reserve seats on Saturdays and Sundays as well as week-days—a facility not available on the Southern Region during the summer. Seat reservations can be made on more than 200 main-line trains this winter.

As a result of revision of timings and accelerations on the French Railways the journey from London to Paris by the "Golden Arrow" service will be reduced by half-an-hour, from October 3, and passengers will be able to reach Paris 7 hr. after leaving London, as against the present time of 7½ hr. and 6 hr. 44 min. before the war.

Scottish Region

In the Scottish Region, the 4.30 p.m. Inverness to London, Euston, will leave at 5.35 p.m., and run *via* Carr Bridge instead of *via* Forres, and will effect an improvement in the Inverness-London night service of 65 min. The 10.50 p.m. Euston to Perth, Sundays to Fridays inclusive, is a new service, and is being introduced to provide a later service from London to Perth than the existing 7.30 p.m. from Euston. Other alterations include:—

4.20 a.m. Glasgow Central to Stirling re-timed to leave at 4.0 a.m. and extended to Aberdeen

New week-day and Sundays train to leave Edinburgh for Carstairs at 11.15 p.m. to connect with 11.25 p.m. from Glasgow Central to Liverpool and Manchester

9.5 a.m. Glasgow St. Enoch to Fairlie Pier (reinstatement of Arran boat express which was discontinued in October, 1947)

Over 80 local services introduced during the summer on the former L.M.S.R. section of the Region are being continued, representing an additional mileage of approximately 8,000 each week.

The principal alterations on the ex-L.N.E.R. Section are concerned with the hourly interval services to be introduced between Glasgow Queen Street and Edinburgh, and will involve the introduction of the following additional trains:—

12.0 noon, 3 p.m., Edinburgh to Glasgow
12.0 noon, 3 p.m., 7 p.m., Glasgow to Edinburgh

The 10.20 p.m. Edinburgh to Thornton on Saturdays will be continued forward to Dundee and give connection off the 1.20 p.m. from Kings Cross.

Passenger train services in the Scottish Region will in general be accelerated.

Building Plan of Pennsylvania Railroad.—The Pennsylvania Railroad has announced that it is beginning a $216,700,366 building programme, said to be the largest in railway history. Every Pennsylvania through passenger train is to have supervised children's playrooms, movies, refreshment lounges, temperature controls, and other modern conveniences. Some of the improvements envisaged are doors that open at a touch by compressed air, new style bogies eliminating virtually all sway on curves, fluorescent lighting throughout giving a "mellow shadowless glow," longer passenger coaches with fewer seats, giving more leg room, and sleepers which are all-room cars with no open-section berths. It is reported that the Pennsylvania has arranged for the purchase of 566 diesel-electric locomotives and plans to use them on all its through passenger trains for New York to the west and south.

Industrial X-ray for British Railways

The Gorton locomotive repair works of British Railways, Eastern Region, has been equipped with an industrial X-ray apparatus, installed at a cost of more than £3,000. It has been designed to search out hidden weakness in metal components not visible to normal inspection.

Since it was put into service six months ago, the apparatus has enabled Gorton engineers to repair damaged sections of locomotive boilers which had previously to be scrapped, and already it has saved British Railways thousands of pounds. The units repaired are copper fireboxes in which fissures and fractures can be cured by welding.

The unit is used exclusively for taking photographic films, processed in a special laboratory built for the purpose, in which all water is electrically heated and thermostatically controlled at three standard temperatures. The processing and interpretation of the X-ray films is carried out by specially qualified technicians, who have achieved results of high standard.

The laboratory also is fitted with the latest type of projection microscope on which metal specimens can be enlarged up to 4,000 magnifications and photographed for metallurgical examination.

Another interesting practice recently introduced at Gorton is a new apparatus for determining stresses in components by the use of polarised light. This method, known as photo-elastic stress analysis, calls for the construction of perfect scale models, made from a transparent plastic, of the parts to be analysed. When a strain is applied, the stresses show up as patches of light and shade under the action of the polarised light, and by this method can be determined results which otherwise might entail a great deal of painstaking mathematical calculation to establish.

Cheap Fare Train Results

During the week ended August 28, a number of special trains were run in the Southern Region in connection with excursions, party traffic, sporting events, and so forth. In the following table the number of passengers carried by these trains and the estimated receipts accruing are shown.

An editorial note dealing with these results appears on page 286 of this issue.

Date	From	To	No. of passengers	Estimated receipts
				£
Sun. Aug. 22	Reading	Bognor Regis	77	39
,, ,, ,,	Wimbledon	,, ,, ...	215	118
,, ,, ,,	Windsor	Littlehampton	117	60
,, ,, ,,	Deptford, etc.	Ramsgate, etc.	102	61
,, ,, ,,	Hither Green, etc.	,, ,, ...	180	99
,, ,, ,,	Denmark Hill, etc.	,, ,, ...	140	87
,, ,, ,,	Bickley	Margate	465	219
Tues. ,, 24	Victoria	Brighton	1,318	628
Wed. ,, 25	Dartford, etc.	Ramsgate, etc.	651	179
,, ,, ,,	Maidstone, etc.	Folkestone, Dover	221	57
,, ,, ,,	Eastleigh	Bournemouth	295	56
,, ,, ,,	Streatham Hill	Brighton	1,672	513
,, ,, ,,	Weymouth	Portsmouth and Southsea ...	145	59
,, ,, ,,	Reading	Brighton	106	56
,, ,, ,,	Wimbledon	Littlehampton	277	139
,, ,, ,,	Horley	,, ...	318	90
,, ,, ,,	Plymouth	Bere Ferrers	300	17
Thurs. ,, 26	Lewes	Littlehampton	600	118
Sat. ,, 28	Faversham	Charing Cross	620	304
,, ,, ,,	Aylesham	Broadstairs	530	88
,, ,, ,,	Dartford	Margate	300	170
,, ,, ,,	Victoria	,, ...	1,000	754
,, ,, ,,	Eastleigh	Hayling Island	270	37
,, ,, ,,	Southampton Term. ...	Lyndhurst Road	312	18
			10,235	£3,966

London Transport Station Signs.—Standard "bar and circle" station signboards are now replacing the red-diamond signs on the former Metropolitan & Great Central line. This is part of a general scheme for replacing some 400 unorthodox or damaged signs on the London Transport system. Later, the Stanmore Hammersmith & City, Circle, and East London lines will be dealt with to make station signs uniform throughout.

Out-of-gauge Load.—A 110-ton electric stator consigned from the works of Parsons Limited, Heaton, nr. Newcastle, reached Bawtry, nr. Doncaster, on September 5, on the third stage of its rail journey to Birmingham. More than 13 ft. high, nearly 13 ft. wide, and 20 ft. long, this difficult outsize consignment is the second one of its kind to traverse this route in a little over twelve months. The stator left Newcastle on August 22 and is expected to arrive in Birmingham on September 26. Average speed of movement is only 5 m.p.h. The width of the load exceeds by 4 ft. the maximum normally permissible, and therefore can be moved only on Sundays, when adjacent lines can be kept clear of traffic. In Mapperley Tunnel, nr. Nottingham, railway engineers again will have to slue 70 yds. of track to provide headroom for the load, and special measures have had to be taken to enable the stator to clear fixed lineside obstacles at a considerable number of points on the route.

Southern Region Railway Accounting Course.—An interesting course was recently completed at the Southern Region Training College at Gorse Hill, Woking, for staff engaged on accountancy work. So far as is known, it was the first residential course of instruction in railway finance and accounting held in this country. The course lasted four weeks, from July 12 to August 7. The students were selected from various sections of the Accountant's Department, and the Accounts Section of the Chief Mechanical Engineer's, Docks & Marine Manager's, and Electrical Engineer's Departments. The syllabus was designed to cover the principles of all aspects of railway finance, accountancy, audit and statistics, and was most comprehensive. Lecturers were selected for their specialised knowledge of their subjects, and précis notes were prepared for each of the lectures given. The instruction was practical, as well as theoretical, and visits were made to booking and goods offices, to municipal offices, and to the C.M.E.'s office at Swindon.

Notes and News

Boiler Inspector for Oil Company in South America Required.—A boiler inspector, between 25 and 35 years of age, is required by an oil company in South America for refinery and oilfield boilers. See Official Notices on page 311.

Convertible Wagons for Queensland.—Tenders are invited by the Agent-General for Queensland for the supply and delivery free on Railway Wharf, Brisbane, Queensland, in running order, of 100 convertible wagons (Class H.V.S.). See Official Notices on page 311.

Vacancies on East African Railways.—Clerks, Grade II, not over 30 years of age, are required by the East African Railways & Harbours Administration for the accounts department for one tour of 36 to 48 months with prospects of permanency. See Official Notices on page 311.

Docker Brothers Address.—The firm of Docker Brothers, the paint, varnish, cellulose lacquer makers, etc., has vacated its temporary offices at 177, Corporation Street, Birmingham, 4, and Guildhall Buildings, Navigation Street, Birmingham 2, and is now at the rebuilt offices of its factory at Rotton Park Street, Birmingham.

Western Region Hop-Pickers Specials.—Last week-end British Railways. Western Region, ran the first of some 20 special trains which will convey 10,000 hop-pickers from South Wales and the Birmingham and Wolverhampton districts, to the Herefordshire and Worcestershire hopyards. Special arrangements have also been made to convey friends and relatives visiting the hop-pickers at week-ends during the season. In addition to pickers staying at the farms for the season, many are being conveyed daily from Worcester, Hereford, and other towns in the vicinity, travelling out in the morning and back at night.

Locomotive Repatriation from France.—Five former L.M.S.R. Class "3F" 0-6-0 tank locomotives, transferred to the War Department in 1940 for service in Europe, recently have been located in France, and are being returned to the London Midland Region of British Railways. All had been used at St. Nazaire or Brest, by the Germans, and bear the scars of battle. Eight engines of this class originally were sent to France. The five now being returned were all slightly modified by the Germans. Before going into service they will be repaired at Derby.

Brazilian Locomotive Order for France.—An order for 103 steam locomotives was recently placed by the Brazilian Government with Le Groupement pour l'Exportation de Locomotives en Sud-Amérique, the group formed by the French locomotive manufacturers Batignolles-Châtillon, Cail, Fives-Lille, and Schneider. In connection with the order, the Brazilian Government appointed a special commission entrusted with the working out of the particulars of the order, and the establishment of the shares to be allocated to each of the four component firms of the group.

Further Russian Contracts.—The associated companies, the Brush Electrical Engineering Co. Ltd., Loughborough, J. & H. McLaren Limited, Leeds, and Mirrlees, Bickerton & Day Limited, Stockport, have negotiated further contracts with the Trade Delegation of the U.S.S.R. for the supply of diesel engines and electrical equipment to Russia amounting to £3,500,000. This, with earlier orders, brings the total to £6,000,000. A proportion of this total is for equipment specified in the Anglo-Russian Trade Pact. Equipment to the value of over £500,000 has been shipped to date against which substantial payments have already been received.

G.N.R.(I.) "Enterprise" Express Buffet Service.—The buffet car and snack service on the new "Enterprise" express of the G.N.R. (I.), described in our September 3 issue, enables an average of 120 meals to be served on the 2¼-hr. journey. In one corner of the car is an attractive cold table. Breakfast costs 3s. 6d. and morning coffee 1s. 6d. The cocktail bar is open throughout the journey. The compact kitchen is equipped with Calor gas cooker, hot-water boiler, refrigerator, water filter, sink, and racks for plates. Triangular aluminium bars, along which cups are slipped into each other, replace the usual hooks. A service hatch with an aluminium topped table enables meals to be served quickly. A separate service is available for passengers in their compartments; for two shillings, each traveller receives a sandwich box and a cup of tea or coffee, each box containing four sandwiches, a piece of cake, four biscuits, and a serviette. This separate bar, situated at the end of the train, is equipped with Calor gas stove and boiler and washing-up facilities. The kitchen is staffed by a cook and two assistants.

French Rail Strike.—Trains from the south have been arriving late at the Gare de Lyon, Paris, as a result of a railway strike at Dijon. About 1,000 railwaymen, including train crews and depot staff, ceased work on September 2; no locomotives left the depot and goods traffic was stopped. The men are asking for a minimum wage of 15,000 francs, guaranteed purchasing power, and suppression of local reductions from Paris wage rates.

Wagon Repairing at Polish Shipyard.—In addition to its normal activities, in which repair work of small vessels now ranks first, a shipyard at Gdansk (formerly Danzig) has also taken up wagon repairing. In the past two years the railway department of the shipyard repaired 665 goods wagons and coaches, 525 tank wagons, and 60 badly-damaged locomotive boilers. The shipyard employs 1,100, and belongs to the United Polish Shipyards Company which owns another shipyard at Gdansk, and one at Gdynia.

Eastern Region Station Gardens Competition.—In making their report on station gardens entered for the 1948 Eastern Region competition, the judges stated that the general standard again had been high, particularly in view of the lateness of the floral display due to adverse weather. The following stations in the Manchester district secured awards in the competition, for which there were 244 entrants and in which nearly £800 was distributed in prize money:—

First class

Saughall
Stationmaster, Mr. G. Temple
First class certificate and cash prize of £5

Second class

Fallowfield
Stationmaster, Mr. W. Cunnington

Cefnybedd
Stationmaster, Mr. T. J. Davies
Second class certificate and cash prize of £4

Third class

Ashton-in-Makerfield
Stationmaster, Mr. L. Wooley

Lowton St. Mary's
Stationmaster, Mr. D. Lazarus

Wilbraham Road
Stationmaster, Mr. W. Cunnington

Hope Village
Stationmaster, Mr. P. Cooke

Penyffordd
Stationmaster, Mr. A. Hughes

Heswall Hills
Stationmaster, Mr. G. C. Wilson

Glossop Central
Stationmaster, Mr. G. Smeaton

Wortley
Stationmaster, Mr. H. G. Lewis

Third class certificate and cash prize of £3

More Excursions on the Southern Region.—Southern Region half-day excursions from suburban and provincial stations have proved so popular that not only have they been repeated, but on September 1 and 2, Londoners also could have once again a good half-day outing to the sea at fares less than a penny a mile. Special trains left Victoria, Waterloo, Charing Cross, and London Bridge at approximately 12.00 noon for the coast. They were, on September 1, Victoria to Herne Bay, Margate, and Ramsgate; Victoria to Eastbourne, Bexhill, and Hastings; and Waterloo to Portsmouth & Southsea, and Ryde, I.O.W., and, on September 2, Victoria to Brighton, and Worthing; and

Locomotive Repatriation

No. 7660, one of five former L.M.S.R. tank locomotives recently located in France, at Cricklewood on its way from Dover to Derby Locomotive Works for reconditioning (see paragraph above)

OFFICIAL NOTICES

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

RAILWAY engineer, 17 years' intensive executive experience British and Military railways, new works and maintenance, including electrified tracks, 4½ years' recent commercial experience with large British Steel Company making railway equipment. Desires change or return to executive job on railway work either home or abroad.—Box 150, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

REQUIRED by major oil company in South America, Boiler Inspector for refinery and oilfield boilers. Candidates must have thorough knowledge of boilers in general, also some knowledge of modern-type oilfield boilers, be prepared to train and supervise boiler repair crews and make internal inspections. Age 25/35 years approximately. Successful candidate would be offered three years' contract, with prospect of permanency, free passage to and from Venezuela on completion of contract. Starting salary from the equivalent of £950 per annum upwards, according to age and experience. £75 outfit allowance. Selected candidates required to attend London for interview and medical examination as to fitness for tropical service. Apply in writing, stating age and full details of education, qualifications and experience, to Box ZE.751, Deacons Advertising, 36, Leadenhall Street, London, E.C.3.

Crown Agents for the Colonies

APPLICATIONS from qualified candidates are invited for the following posts:—

CLERKS, Grade II, required by the East African Railways and Harbours Administration for the Accounts Department for one tour of 36 to 48 months, with prospects of permanency. Salary according to age and experience in the scale £315 rising to £405 a year, plus cost-of-living allowance of £77 10s. a year for single man and between £118 and £187 10s. for married man, according to number of children. Outfit allowance £30. Candidates, not over 30 years, should have had experience in Head or District Office Railway Revenue accounting methods. Knowledge of station accounting an advantage. Apply at once by letter, stating age, whether married or single and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/17930 (3E) on both letter and envelope.

FOR EXPORT, immediate delivery, unused Sentinel B.E.-type Industrial Steam Locomotive, 100-h.p., standard gauge.—Write Box 564, Dorland Advertising, 18/20, Regent Street, S.W.1.

4-8-2 CLASS "15F" LOCOMOTIVE FOR THE SOUTH AFRICAN RAILWAYS. The latest examples of these main-line passenger and freight locomotives have been built by the North British Locomotive Co. Ltd. Reprinted from *The Railway Gazette* of September 20, 1946. *Price* 2*s*. *By post* 2*s*. 2*d*.

Queensland Railways

TENDERS are invited by the Agent-General for Queensland for the manufacture, supply and delivery free on Railway Wharf, Brisbane, Queensland, in running order, of 100 Convertible Wagons (Class H.V.S.).

Drawings, specification, general conditions of contract, and conditions of tendering, are obtainable at the Office of the Agent-General for Queensland, at a cost of £2 2s. A preliminary deposit of £100 (one hundred pounds) must accompany the tender.

Early delivery is required, and the time in which tenderers undertake to complete and deliver these wagons may influence the letting of the contract. The lowest, or any, tender will not necessarily be accepted.

Tenders sealed and endorsed "Tender for Steel Wagons," will be received up to 12 noon on Tuesday, September 28, at the Office of the AGENT-GENERAL FOR QUEENSLAND, 409-410, Strand, London, W.C.2.

ELECTRIC TRACTION ENGINEER with 22 years' experience and ultimately sole charge of a large overseas electrified railway, desires appointment in a responsible post, preferably connected with railway electrification.—Box 161, *The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

RAILWAY MAINTENANCE PROBLEMS By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth, 8¼ in. by 5¼ in. 82 pp. Diagrams. 5*s*. *By post* 5*s*. 3*d*.

Charing Cross and London Bridge, to Whitstable, Broadstairs, Ramsgate, and Margate. Bookings were available from intermediate stations *en route*, including New Cross, Clapham Junction, Wimbledon, Hither Green, and Dartford. Evening excursions to Brighton from a number of suburban stations, including Balham, Norwood Junction, East Croydon, and Purley by certain trains after 4.0 p.m. at "cut price" fares, are running every Wednesday from September 1 to 22. (See also news article on page 309.)

Coach Heating on the L.M.R.—Steam heater pipes are now being refitted to the 15,700 passenger carriages running over the London Midland Region and Scottish Region of British Railways in readiness for the autumn and winter. Express trains running through the night will be heated from September 15, and other passenger trains from October 1.

Associated Equipment Company.—As a result of the acquisition by the Associated Equipment Co. Ltd. of Crossley Motors Limited and the Maudslay Motor Company the company has decided to transfer its manufacturing business to a separate subsidiary undertaking, and to limit its own functions to those of a holding company. It is proposed to change the name of the parent company to Associated Commercial Vehicles Limited and to assign the manufacturing business to the wholly-owned subsidiary A.E.C. Limited as from October 1. An extraordinary general meeting will be held on September 24.

British Exhibition at Copenhagen.—Further details of the British exhibition in Copenhagen were given by Sir Guy Locock at a press conference held on September 6, at the Federation of British Industries. As was recorded in our June 25 issue, some 1,000 British manufacturers will be represented at the exhibition, which is being organised by the British Import Union of Copenhagen, in co-operation with the F.B.I. and with the approval of the Governments of Britain and Denmark. The exhibition will be opened on September 18 by the King of Denmark in the presence of the Duke and Duchess of Gloucester; Mr. Harold Wilson, President of the Board of Trade, also will attend. Five centres are to house the exhibition and will include transport equipment at the Royal Riding House and engineering exhibits at the Forum. In the mornings, only trade buyers and official visitors will be admitted to the exhibition, which will be open to the public after lunch and on Sundays, until October 3.

Railway Police Constable Awarded B.E.M.—For courage and outstanding devotion to duty in preventing the theft of £4,000 of whisky, Railway Police Constable Robert Cameron, of Burton-on-Trent, has been awarded the B.E.M., and on September 2, at Euston, he was personally congratulated by Mr. G. L. Darbyshire, Chief Regional Officer, London Midland Region, and presented with a cheque from the Railway Executive. On a dark night P.C. Cameron picked out a strange lorry laden with whisky in Burton railway sidings. He had just succeeded in putting the motor out of action when he was attacked, struck repeatedly on the head, and, after a struggle, brought to the ground. Feigning unconsciousness, he was dragged to the warehouse and tied up, but as soon as his assailants left he struggled free and made his way to a shunter's cabin, where the county police and ambulance were called. The thieves had to leave behind their disabled lorry with 249 cases of whisky.

British Railways Shooting Match.—A North Eastern Region team of riflemen recently won the British Railways shooting match at Bisley for teams of ten from each of the six regions. Out of a possible 2,000 points they obtained 1,950. The London Midland Region came second, with 1,948, and the Western Region third, with 1,947. The winners will hold for one year a shield presented by Colonel Sir Eric Gore Browne, lately Chairman of the Southern Railway Company, which replaces one presented by the combined General Managers in 1937 and which was destroyed by enemy action. The captain of the North Eastern Region team was Mr.

Railway Executive Presentation to Police Constable

Mr. G. L. Darbyshire, C.B.E., Chief Regional Officer, London Midland Region, presents a cheque to P.C. Robert Cameron (see paragraph above)

Left to right: P.C. Robert Cameron; Mr. H. J. Comber, Chief Officer for Labour & Establishment, London Midland Region; Mr. W. B. Richards, M.V.O., Chief of Police, London Midland Region; Mr. G. L. Darbyshire

H. W. Johnson, of Darlington Locomotive Works, and the team was made up of riflemen from Darlington, York, Hull, and Walkergate, and included one lady, Miss R. Harris, of the District Superintendent's Office, Darlington. Mr. Johnson is to captain the British Railways team which will oppose America and Canadian railways at Derby this month.

Permanent Way Institution, London Section.—A visit has been arranged for members of the London Section, Permanent Way Institution, to the works of Taylor Bros. (Sandiacre) Ltd., near Nottingham, for September 18. Those taking part will be leaving St. Pancras at 8.55 a.m., and will be due back in London at 7.30 p.m. Lunch is being provided by the firm. On September 25, a demonstration will be given of A.T.C. apparatus in the Western Region. The Corresponding Secretary of the section invites questions from members on permanent way matters, and on railway civil engineering generally, for a "brains trust" meeting.

Winter Currency Quota to Switzerland.—The economic information unit of the Treasury has announced that detailed arrangements for tourist travel to Switzerland between November 1, 1948, and February 28, 1949, have been completed by an Anglo-Swiss committee. A limited amount of currency will be available for this period, of which a quota of 45 per cent. has been reserved for independent travellers and 55 per cent. for travel agencies. The amount authorised will be based on the duration of stay in Switzerland and on the scale of hotel charges in each case within the basic annual allowance of £35 (adults) and £25 (children).

Commercial Motor Transport Exhibition.—Among the exhibits of Leyland Motors Limited at the Commercial Motor Transport Exhibition, to be held at Earls Court from October 1 to 9, will be a new under-floor engine power unit intended for single-deck passenger work at home and abroad. This unit, which is fitted with a Leyland 0·600 direct-injection oil engine, weighs 2,200 lb. and has a height of only 1 ft. 10 in. overall, so that allowing the British legal round clearance of 10 in., floor heights of 2 ft. 11 in. will be readily obtainable. Leyland products also will be shown on other stands. The Brush Electrical Engineering Co. Ltd. will exhibit a single-deck vehicle for the Yorkshire Traction Company on a Tiger PS. 2/1 chassis, and H. V. Burlingham Limited a Low-bridge double-deck bus for Ribble Motor Services on a PD. 2/3 8 ft. wide chassis.

Forthcoming Meetings

September 15 (*Wed.*)—The Institution of Locomotive Engineers, general meeting at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 5.30 p.m. The Presidential Address of Lt.-Colonel H. Rudgard, Chief Officer, Motive Power, the Railway Executive.

September 17 (*Fri.*)—Railway Correspondence & Travel Society, Birmingham Section, at the Imperial Hotel, Temple Street, Birmingham, at 7 p.m. "Light Railways," by Mr. R. L. Shepherd.

September 17-21.—Railway Students Association, London School of Economics & Political Science; Convention at Crewe Hall, Sheffield.

September 18 (*Sat.*)—The Permanent Way Institution, London and Manchester & Liverpool Sections. Visit to works of Taylor Bros. (Sandiacre) Ltd.

Railway Stock Market

Although more active, there has been an undertone of uncertainty in stock markets, particularly in the industrial sections, where caution prevailed, attention being focused on the T.U.C., the new production drive, and statements on the dollar shortage. Investment has still centred mainly on British Funds and speculation on South African gold shares. There was renewed demand for the nationalisation stocks. Transport 3 per cent. (1978-88), despite a good deal of selling on any improvement in price, has risen to 99, the highest since dealings started last January, some institutional buyers apparently thinking that this stock may reach par over the next few weeks.

Foreign railway stocks became quieter following the recent activity in Brazil rails on take-over possibilities. Dealers continue to take the view, however, that part of the pending pay-out money in respect of Argentine rail ordinary and preference stocks, will be reinvested in Brazil and other foreign rails. Meanwhile, Leopoldina have eased to 11¼, the preference stock to 36½, and the 4 per cent. debentures to 69, while Leopoldina Terminal 5 per cent. debentures at 63 also have failed to hold recent gains. Great Western of Brazil £10 shares fluctuated moderately around 96s. Central Uruguay stocks were steady, with the ordinary at 11 and second debentures at 80, awaiting approval of the revised scheme. Brazil Railway gold bonds were better at 44½. San Paulo, after receding to 159, rallied to 163, and United of Havana 1906 debentures (17¾) continued to attract more attention. Antofagasta ordinary was 10½, with the preference firmer at 65. A feature was revival in National Railways of Mexico stocks, particularly the 4½ per cent. 1957, which improved to 13¼, while Mexican Railway 6 per cent. debentures also rose sharply to 87. Nitrate Rails shares were 77s. 6d. and firmly held, while in other directions, Beira Railway bearer showed steadiness at 62s. 6d. Canadian Pacifics have been more active on hopes of a further increase in freight rates. It is realised that without this there would be little prospect of maintaining the dividend. Canadian Pacific 4 per cent. preference stock was 78, and the 4 per cent. debentures 108. French Railway sterling bonds were virtually unchanged.

Road Transport shares attracted only limited attention apart from Tillings, which moved up to 103s. 6d. Shares of some of the operating companies also improved, notably Scottish Motor Traction (98s. 6d.); but generally buyers found them firmly held and not available in any amount. The market is still assuming that Tillings are worth well over their current price, but it is realised that much will depend on the outcome of the negotiations with British Transport regarding compensation for assets required by the latter.

Staveley Coal have been prominent with an advance to close on 81s. in view of the big profit increase recently announced and the assumption that there may be a special payment for shareholders next year arising from the capital return proposed by Doncaster Amalgamated Collieries in which Staveley is a big shareholder. Despite the fear of nationalisation, iron and steel shares have further improved, notably Stewarts and Lloyds, while Guest Keen made fresh response to the full results and chairman's statement. United Steel, Dorman Long, and Colvilles were moderately higher on balance, and Thomas & Baldwins continued to change hands around 15s. Charles Roberts eased to £7¼, although the lower profits for the past year were not unexpected, bearing in mind the loss of income from nationalised wagons. The market is still assuming that compensation for the latter may mean a special payment or partial capital return for shareholders. Beyer Peacock have changed hands at close on 22s., and North British Locomotive were 22s. 9d., and Vulcan Foundry 28s.

Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1946 47	No. of weeks	Aggregate traffics to date: Total 1947 8	Aggregate traffics to date: Increase or decrease
				£	£		£	£
South & Central America	Antofagasta ...	811	29.8.48	62,760	+ 16,470	35	1,839,500	+ 404,650
	Bolivar ...	174	July, 1948	$28,960	— $69,357	30	$471,287	— $301,893
	Brazil ...	—	—	—	—	—	—	—
	Cent. Uruguay	970	28.8.48	30,511	+ 1,763	8	273,004	— 16,845
	Costa Rica ...	262	July, 1948	41,632	+ 8,774	4	41,632	+ 8,774
	Dorada ...	70	July, 1948	33,466	+ 466	30	175,666	— 37,134
	G.W. of Brazil	1,040	28.8.48	27,600	+ 2,000	34	1,108,300	+ 15,100
	Inter. Ctl. Amer.	794	July, 1948	$120,123	— $81,936	30	$1,095,789	— $796,960
	La Guaira ...	22¾	Aug, 1948	$95,776	— $1,298	35	$837,334	— $44,900
	Leopoldina ...	1,918	28.8.48	68,516	+ 2,597	34	1,901,366	— 383,139
	Midland Uruguay	319	July, 1948	23,007	+ 5,963	4	23,007	+ 5,963
	Nitrate ...	382	31.8.48	11,760	+ 1,696	35	202,016	+ 46,816
	N.W. of Uruguay	113	July, 1948	5,229	+ 1,766	4	5,229	+ 1,766
	Paraguay Cent.	274	27.8.48	G105,247	+ G53,749	8	G825,858	+ G461,896
	Peru Corp. ...	1,059	Aug, 1948	172,239	+ 2,746	9	351,181	+ 18,998
	Salvador ...	100	June, 1948	c121,000	+ c30,000	52	c2,020,600	+ c321,600
	San Paulo ...	153¼	—	—	—	—	—	—
	Taltal ...	156	July, 1948	10,010	+ 4,425	4	10,010	+ 4,425
	United of Havana	1,301	28.8.48	40,188	— 18,250	8	389,362	— 150,267
	Uruguay Northern	73	July, 1948	1,170	+ 33	4	1,170	+ 33
Canada	Canadian National	23,473	July, 1948	10,450,250	+ 943,000	30	67,566,250	+ 4,998,750
	Canadian Pacific	17,037	July, 1948	7,454,250	+ 524,000	30	47,661,750	+ 3,025,250
Various	Barsi Light† ...	202	July, 1948	33,300	— 795	17	114,007	— 322
	Beira ...	204	June, 1948	112,390	+ 12,957	38	1,048,644	+ 219,747
	Egyptian Delta	607	10.7.48	17,470	+ 929	14	178,422	+ 15,399
	Gold Coast ...	536	July, 1948	201,177	+ 49,765	17	867,019	+ 239,844
	Manila ...	—	—	—	—	—	—	—
	Mid. of W. Australia	277	June, 1948	26,319	+ 8,295	52	294,752	+ 80,772
	Nigeria ...	1,900	June, 1948	403,138	+ 91,614	13	1,292,292	+ 249,560
	Rhodesia ...	2,445	Sept., 1947	643,980	+ 102,833	52	6,787,603	+ 612,938
	South Africa	13,347	7.8.48	1,323,609	+ 74,197	18	24,313,567	+ 1,328,671
	Victoria ...	4,774	Apr., 1948	1,338,846	+ 615,854	43	—	—

† Receipts are calculated @ 1s. 6d. to the rupee